

# **ENVIRONMENTAL ASSESSMENT WORKSHEET**

## **50th Avenue NW PHASE II**

### **50th Avenue NW**

**From: Valleyhigh Road NW (CSAH 4)**

**To: 51st Street NW/Nicklaus Drive**

**In the City of Rochester,  
Olmsted County**

EAW Prepared by:

**SRF Consulting Group, Inc.**

**April 2007**

SRF No. 0055372

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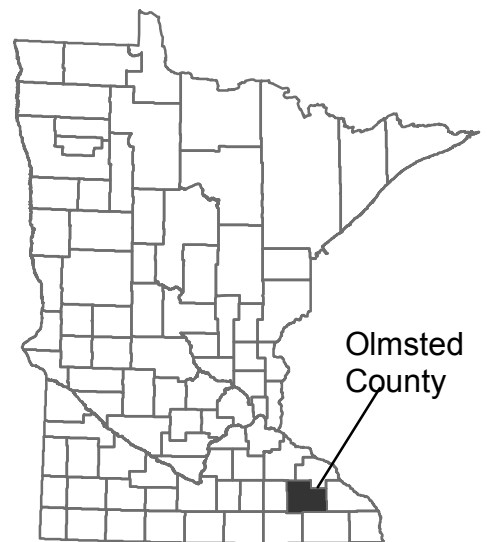
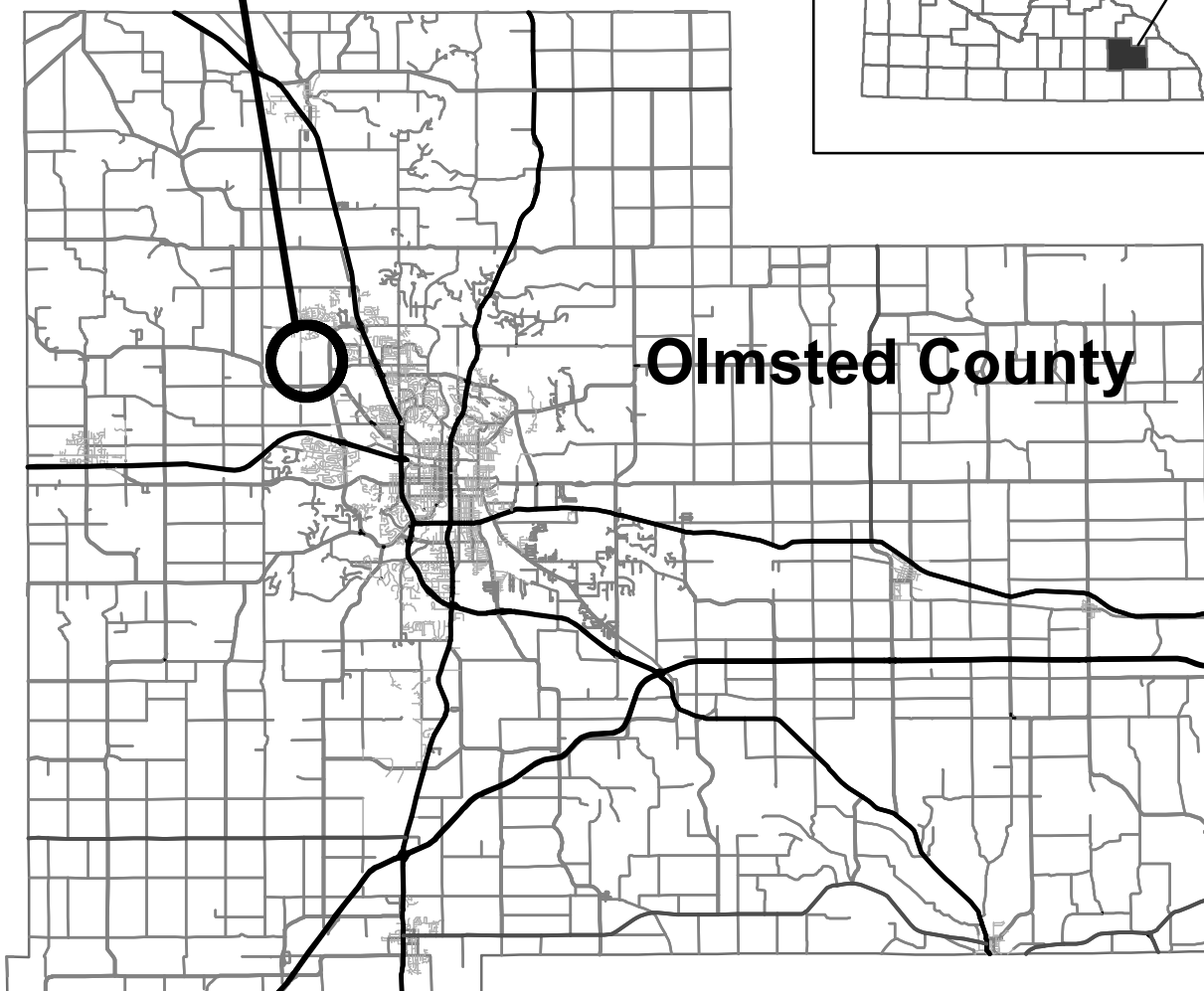
Minnesota Department of Natural Resources (DNR) correspondence  
Minnesota Department of Transportation – Office of Environmental Services (Mn/DOT OES)  
Minnesota Department of Transportation – Cultural Resources Unit (Mn/DOT-CRU)  
National Resource Conservation Service (NRCS) and CPA-106 Form

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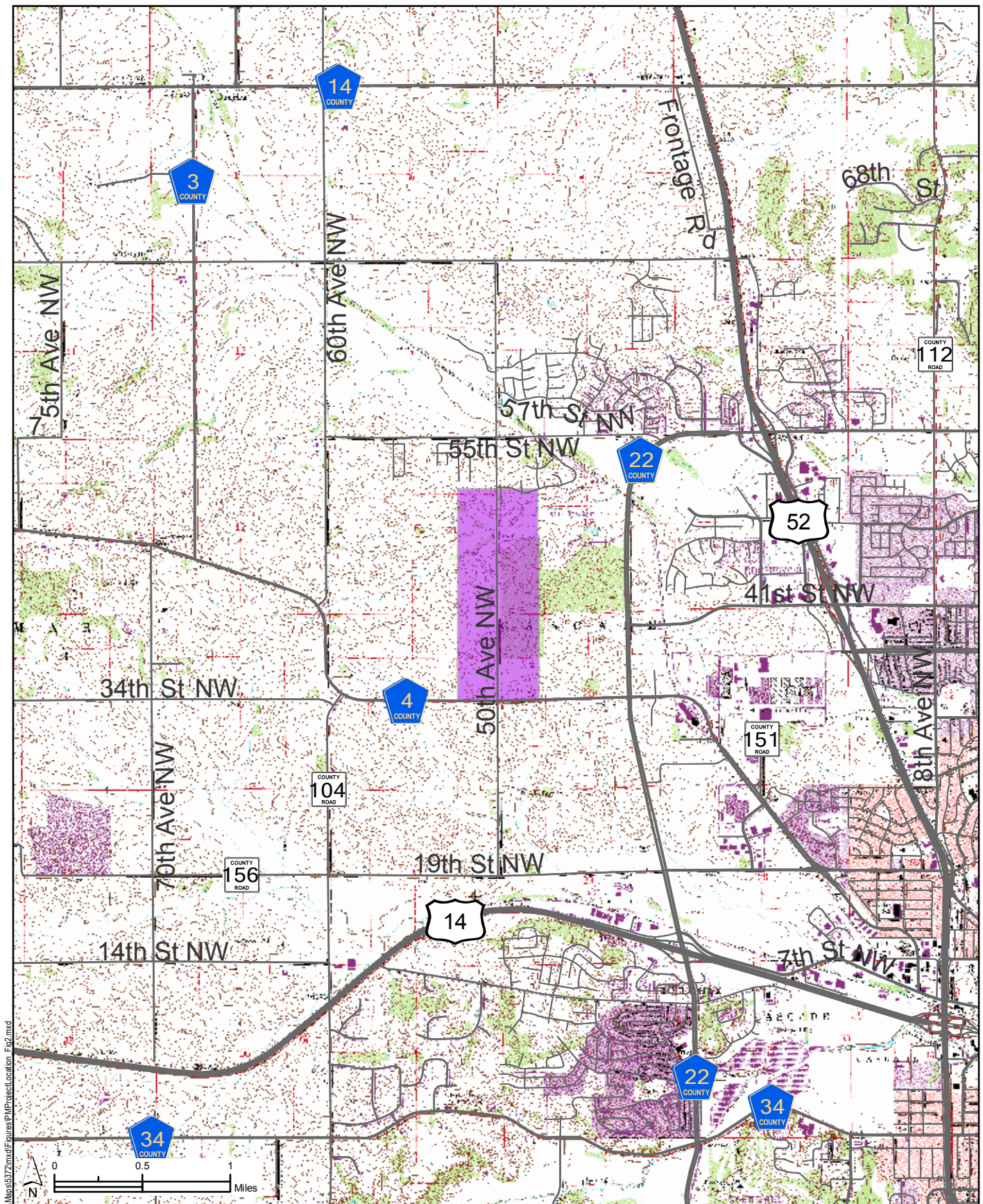
## **PROJECT LOCATION**



### **AREA LOCATION MAP**

ENVIRONMENTAL ASSESSMENT WORKSHEET  
50th Avenue Phase II Project  
City of Rochester, MN  
0065372 11/01/06

**Figure 1**



## PROJECT LOCATION

Figure 2

ENVIRONMENTAL ASSESSMENT WORKSHEET

50th Avenue Phase II Project

City of Rochester, MN

0065372 11/01/06

# ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to preparers: This form is available at [www.mnplan.state.mn.us](http://www.mnplan.state.mn.us). *EAW Guidelines* will be available in Spring 1999 at the web site. The Environmental Assessment Worksheet provides information about a project that may have the potential for significant environmental effects. The EAW is prepared by the Responsible Governmental Unit or its agents to determine whether an Environmental Impact Statement should be prepared. The project proposer must supply any reasonably accessible data for — but should not complete — the final worksheet. If a complete answer does not fit in the space allotted, attach additional sheets as necessary. The complete question as well as the answer must be included if the EAW is prepared electronically.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. **Project title:** 50th Avenue NW Phase II

2. **Proposer:** City of Rochester  
Contact Person: Richard Freese  
Title: Public Works Director  
Address: 201 4th Street SE  
City, State, Zip: Rochester, MN 55904  
Phone: 507-281-6195  
Fax: 507-281-6216

3. **RGU:** Rochester City Council  
Contact Person: Dennis Hanson  
Title: Council President  
Address: 201 4th Street SE  
City, State, Zip: Rochester, MN 55904  
Phone: 507-285-8082  
Fax: 507-287-7979

4. **Reason for EAW preparation: (check one)**  
EIS scoping ☐ Mandatory EAW ☒ Citizen petition ☐  
RGU discretion ☐ Proposer volunteered ☐

**If EAW or EIS is mandatory give EQB rule category subpart number and subpart name:**

**Response:** Part 4410.4300 Subp. 22(B) – Highway projects

For construction of additional travel lanes on an existing road for a length of one or more miles.

5. **Project location:** County: Olmsted  
City: Rochester  
Sections: 17, 18, 19, 20 Township: T107N Range: 14W

**Attach each of the following to the EAW:**

- County map showing the general location of the project  
(See Figure 1 on page iv)
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries  
(See Figure 2 on page v)
- Site plan showing all significant project and natural features.  
(See Figure 3 in Appendix A-1)

6. **Description**

- a. **Provide a project summary of 50 words or less to be published in the *EQB Monitor*.**

**Response:**

Reconstruct 1.2 miles of 50th Avenue NW, from Valleyhigh Road (CSAH 4) to 51st Street NW/Nicklaus Drive, to a four-lane facility with off-road trails, roundabout at Badger Hills Drive, storm sewer, two stormwater ponds, stilling basin in golf course, a Section 4(f) property. Net Benefits Programmatic Section 4(f) Evaluation was completed.

- b. **Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.**

**Response:**

Project Description

The proposed project will include expanding the existing two-lane rural section (see Figure 4 in Appendix A-1) to a four-lane urban (curb and gutter) section (See Figure 5 in Appendix A-1). As part of the reconstruction project, the roadway will be shifted west approximately 50 feet from the existing roadway centerline to reduce impacts to the overhead utility lines along the east side of 50th Avenue NW. The roadway will be shifted west

approximately 70 feet along the Northern Hills Golf Course, a Section 4(f) resource, in order to completely avoid roadway impacts to this resource. Bituminous off-road pedestrian/bicycle paths will also be constructed on both sides of the roadway. In addition, a roundabout will be constructed at Badger Hills Drive. Intersection improvements at intersecting future roads will occur when development takes place. The project will include a regional storm water retention pond on the west side of 50th Avenue NW, at the low point, to collect storm runoff in preparation for future development. 50th Avenue NW will act as a Hazard Class II Dam for the storm water pond. A drainage control structure will be built to regulate the pond elevation during variant storm events and will outlet easterly via a 6' x 8' box culvert, under 50th Avenue NW, into the existing channel in the Northern Hills Golf Course, a Section 4(f) property. A stilling basin will be constructed within the Northern Hills Golf Course at the end of the culvert segment and lined with large boulders to act as an energy dissipater to reduce erosion down stream for a 500-year storm event. Additional roadway and storm water pond alternatives were considered to avoid impacts to the Northern Hills Golf Course.

#### Construction Staging/ Project Schedule

Construction of the project is anticipated to begin in fall 2007 and be completed by fall 2008. Specific details for construction staging will be determined during the detailed design phase. The tentative schedule is as follows:

- Fall 2007

50th Avenue NW will be closed from Valleyhigh Road NW (CSAH 4) to the 51st Street NW/Nicklaus Drive intersection for roadway construction and utility relocation/installation. Access to the rural residences on the west side of 50th Avenue NW will be maintained at all times.

- Fall/Winter 2007

Construct the embankment for regional pond and stilling basin, box culvert and grading at the Northern Hills Golf Course.

- Fall 2008

The project will be substantially complete.

The following is an overview of the project schedule:

Project Memorandum Update/EAW	May 2006- May 2007
Opportunity for Public Hearing	May 2007
EAW Record of Decision	June 2007
Detail/Design	October 2006 – May 2007
Right-of-Way Process	October 2006 – July 2007
Contract Letting	Fall 2007
Construction	Fall 2007/2008

### Temporary Construction Impacts

Complete closure of the project corridor will occur over the extent of the project for the entire duration of construction. Local through traffic will be allowed along the corridor in order to maintain access at all times to the existing residents along the corridor.

Construction activities, including tree removal and grading, are likely to result in noise and dust impacts typical to construction activities. The project as proposed, is not anticipated to result in earthborne vibrations. Construction would be limited to daytime hours in accordance with City and County ordinances. Also, construction equipment will be properly equipped to minimize noise. Dust generated will be minimized through standard dust control measures, such as watering. Permanent cover will be re-established as soon as practicable.

All excess material created by project will be reused/recycled in the project corridor or removed and waste will be disposed of in accordance with local, state and federal requirements.

- c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.**

#### **Response:**

The need for reconstruction of 50th Avenue NW is documented in the *Rochester-Olmsted County Council of Government's Long Range Transportation Plan (August 2005)*, *2005-2010 City of Rochester Capital Improvement Plan*, and the *1999 City of Rochester Storm Water Management Plan*.

In 2003, the City of Rochester applied for and received funding through the Federal Surface Transportation Program for the reconstruction of 50th Avenue NW. The funding request focused on the need to improve the capacity of this north-south connection between 55th Street NW and CSAH 4 in the City of Rochester, which currently experiences traffic volumes of 2,500 vehicles per day and is forecasted to experience traffic volumes between 10,200 and 12,300 vehicles per day in 2035. The 50th Avenue NW corridor has attracted one of the highest levels of residential growth in the City of Rochester. The current federal functional classification of 50th Avenue NW is urban collector. The *ROCOG 2035 Long Range Transportation Plan* designates 50th Avenue NW as a future major urban arterial roadway. Increasing capacity along this roadway will benefit the regional transportation network by providing a route that will transition to an urban major arterial route to aid in the overall distribution of traffic to and from the area, rather than imposing this traffic on existing corridors such as Trunk Highway 52 or West Circle Drive (CSAH 22), as identified in the *ROCOG 2035 Long Range Transportation Plan*.



The federal funding request also included the need to provide separated bicycle/pedestrian facilities on both sides of 50th Avenue NW. Off-road paths such as these are needed for existing and future residential neighborhoods in the area and for access to the Douglas State Trail that crosses 50th Avenue NW, just north of 55th Street. Additionally, these facilities provide a link to various employment nodes in the area. The need for dual off-road pedestrian/bicycle trails along 50th Avenue NW in this area is documented in the *ROCOG 2035 Long Range Transportation Plan*.

The proposed project includes the construction of two storm water ponds. The first pond is a regional storm water retention pond along the west side of 50th Avenue NW near the north end of the project area, with an overflow outlet under 50th Avenue NW into a stilling basin within the Northern Hills Golf Course, a Section 4(f) property. The *1999 City of Rochester Storm Water Management Plan* identified a regional storm water retention pond located along the west side of 50th Avenue NW, near the north end of Phase II. The storm water pond is needed to control the quantity and quality of storm water resulting from the proposed roadway expansion and the future development being planned in this area. This storm water retention pond is a regional pond that will contribute to the greater community's storm water management needs.

In addition, another storm water pond will be constructed near the south end of the corridor, along the east side of 50th Avenue in the northeast quadrant of the intersection of 50th Avenue NW and Valleyhigh Road NW. This pond will be sized to treat road runoff and any other tributary areas that cannot bypass the pond. This pond is not proposed to be a regional pond.

The existing roadway, south of 51st Street NW, is a rural section roadway and has inadequate lane and shoulder widths, has deficient vertical curve lengths and has springtime load restrictions. In addition, the section of roadway that crosses the small waterway is low and often floods with heavy rain and/or the springtime snow thaw. The existing roadway does not currently meet the needs of the area residents and, as traffic levels increase, the deficiencies and safety issues will become more problematic.

Annexations to the City of Rochester, expansion of the Rochester Urban Service Area, and rapid development are occurring along and west of the corridor. There is currently one development in the planning stages adjacent to 50th Avenue NW. This development is expected to add 256 residential units over the next few years.

The federal functional classification of 50th Avenue NW is urban collector. However, development pressure in this area led ROCOG to identify 50th Avenue NW as a future major urban arterial roadway in the *ROCOG 2035 Long Range Transportation Plan*. Improving the roadway section to a four-lane facility will provide a new north-south alternative arterial route to TH 52 and West Circle Drive (CSAH 22). In addition, the proposed improvements will correct the current deficiencies, improve safety, increase capacity and mobility, provide

pedestrian/bicycle accommodations and provide a regional storm water retention pond.

To respond to the needs on 50th Avenue NW, the City of Rochester proposes the following improvements:

- Add through lanes and intersection improvements to increase the capacity and function of the roadway;
- Mitigate vertical curves to improve safety (sightlines);
- Provide a continuous separated walkway/bikeway to improve pedestrian and bicycle operations and safety.
- Provide a regional storm water retention pond and stilling basin to provide storm water quantity and quality control that is consistent with the City's Storm Water Management Plan.

**d. Are future stages of this development including development on any outlots planned or likely to happen? X Yes \_\_\_No**

**If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.**

**Response:**

Improvements to 50th Avenue NW from 65th Street to 85th Street NW and Valleyhigh Road NW (CSAH 4) to 19th Street NW are shown in ROCOG's *2035 Long Range Transportation Plan*. The Plan shows the upgrade/extension of 50th Avenue NW from 65th Street NW to approximately one mile north of 75th Street NW as a four-lane rural section and from that point to 85th Street as a two-lane rural section. The Plan also shows the upgrade of 50th Avenue NW from Valleyhigh Road NW (CSAH 4) to 19th Street as a future four-lane rural section. The purpose of these improvements is to complete the future major arterial designation and function of the entire 50th Avenue NW corridor from 85th Street on the north, to 19th Street on the south.

The ROCOG *2035 Long Range Transportation Plan* does not identify specific timelines for these improvements to 50th Avenue NW beyond stating they are needed within the next 25 years. However, the extensions/upgrades from 65th Street to 85th Street and Valleyhigh Road NW (CSAH 4) to 19th Street are not currently programmed in the City's 2005-2010 Capital Improvements Plan and are thus beyond the 2010 timeframe. Each of these extension/upgrade improvement projects to 50th Avenue NW will individually plan for avoidance, minimization and mitigation measures to reduce project impacts. Also, it is assumed that these projects will obtain all necessary federal, state and local reviews, permits and approvals.

**e. Is this project a subsequent stage of an earlier project? X Yes \_\_\_No**



**If yes, briefly describe the past development, timeline and any past environmental review.**

**Response:**

Phase I of this project was constructed in 2003 and included 50th Avenue NW from 2300 feet south of 55th Street NW to 65th Street NW. Phase I construction consisted of bituminous removal, grading, placement of aggregate base with bituminous surface, concrete curb and gutter, storm sewer, watermain crossings, sanitary sewer and watermain service to a proposed development and bituminous walks on either side of the roadway. The roadway was a three-lane design, with two through lanes and a continuous left turn lane.

A Project Memorandum was approved as a Categorical Exclusion for both Phase I and Phase II on May 25, 2001. A Project Memorandum Update is being prepared in conjunction with this EAW to document the proposed design change of Phase II from three lanes, as originally proposed, to the current four-lane roadway proposal. In addition, a Net Benefits Programmatic Section 4(f) Evaluation has also been prepared to address impacts to the Northern Hills Golf Course, a Section 4(f) property.

**7. Project magnitude data**

**Total project acreage:** 49.1 acres **Total project length:** 1.2 Miles

**Number of residential units:** N/A **unattached:** N/A **attached:** N/A **maximum units per building:** N/A

**Commercial, industrial or institutional building area (gross floor space): total square feet:** N/A

**Indicate areas of specific uses (in square feet):**

**Office:** N/A

**Manufacturing:** N/A

**Retail:** N/A

**Other industrial:** N/A

**Warehouse:** N/A

**Institutional:** N/A

**Light industrial:** N/A

**Agricultural:** N/A

**Other commercial (specify):** N/A

**Building height:** N/A

**If over 2 stories, compare to heights of nearby buildings:** NA

**8. Permits and approvals required. List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.**

**Response:**

The following permits and approvals may be required for the proposed project:

**TABLE 1**  
**PERMITS AND APPROVALS**

<b>Permit</b>	<b>Agency</b>	<b>Action Required</b>
<b>Federal</b>		
Project Memorandum Update	FHWA	Approval
Section 4(f)	FHWA	Approval
Section 404 Authorization- General Permit/Letter of Permission (GP/LOP)	U.S. Army Corps of Engineers	Permit
<b>State</b>		
Project Memorandum Update	Mn/DOT	Approval
EAW	MEQB	Approval
National Pollutant Discharge Elimination System/State Disposal System (NPDES)	Minnesota Pollution Control Agency (MPCA)	Permit
Sanitary Sewer/Watermain Construction	Minnesota Department of Health	Permit
Hazard Class II Dam	MnDNR	Approval/Permit
Section 4(f)	Mn/DOT	Review/Comment
Section 106 (Historic/Archeological)	Mn/DOT Cultural Resources Unit (CRU) and Minnesota State Historic Preservation Officer (SHPO)	Determination of No Effect/ Concurrence
Federal Threatened and Endangered Species	Mn/DOT Office of Environmental Services	Determination of No Effect
<b>Local</b>		
Project Memorandum Update	City of Rochester	Approval
EAW – EIS Need Decision	City of Rochester	Approval/Negative Declaration
Wetland Conservation Act (Replacement Plan)	Rochester-Olmsted Planning Department	Approval of Replacement Plan
Right-of-Way	Olmsted County	Permit

The total estimated project construction cost of the proposed project is \$5,900,000. The project is currently programmed in the State Transportation Improvement Program (STIP). \$1,350,000 of federal funding will be used for the project. The remainder of the street work will be paid for with Municipal State Aid Funds. The storm water ponds will be paid for by the City of Rochester, using storm water management funds.

9. **Land use. Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.**

**Response:**

Land Use and Compatibility

The proposed project is compatible and consistent with projected land use in the vicinity of the project and with the City of Rochester *Future Land Use Plan* and ROCOG's *2035 Long Range Transportation Plan*. The road reconstruction will not change existing land use or zoning. The road reconstruction is programmed in the approved City of Rochester *2005-2010 Capital Improvement Plan*.

The 50th Avenue NW corridor is currently comprised of residential, agricultural/forested lands and recreation lands. The developed land use along the corridor is primarily residential from 51st Street north to 55th Street. However, a church and elementary school are also located in this area. One rural-density dwelling is located just south of 51st Street, along 50th Avenue NW. The Northern Hills Golf Course, a municipal golf course, is located just south of the existing residential development, along the east side of 50th Avenue NW. The middle and southern sections of the 50th Avenue NW project area are primarily rural agricultural and wooded/forested land at this time. There are currently two rural dwelling units located along the west side of 50th Avenue NW. One is located near the north end of the project area, just south of 51st Street NW and the other is located near the south end of the project area. However, urban-density residential development is being planned for this entire area.

10. **Cover types. Estimate the acreage of the site with each of the following cover types before and after development:**

**Response:**

The following cover type information is based on preliminary design and environmental analysis and therefore, represents the approximate acreage of each cover type.

**TABLE 2  
COVER TYPES**

	Roadway/Project	
	Before – acres	After – acres
Types 1-8 wetlands	5.89	8.84
Wooded/forest	5.23	0
Brush/Grassland	11.77	0
Cropland	15.53	0
Lawn/landscaping	6.48	28.96
Impervious surfaces	4.2	11.3
Other:	0	
<b>TOTAL:</b>	<b>49.1</b>	<b>49.1</b>

**If Before and After totals are not equal, explain why:**

N/A

**11. Fish, Wildlife and Ecologically Sensitive Resources**

- a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.**

**Response:**

Water bodies in the vicinity of the proposed project include a small tributary to King's Run, which is a tributary to the South Fork of the Zumbro River, located near the north end of the project termini, just south of 51st Street and running through the Northern Hills Golf Course. This tributary is not on the Public Waters Inventory List. The road will be constructed as a curb and gutter section, minimizing direct sedimentation and water quality impacts to the tributary. Surface water runoff from 50th Avenue NW will discharge to the adjacent proposed regional storm water pond. The tributary is an ephemeral stream with no fish habitat or resources; therefore, no impacts to fish are anticipated. The project will not reduce ephemeral flows through the golf course. Once the regional storm water pond stabilizes, flows will be at least as much as existing conditions under normal conditions (i.e., during non-events).

Existing wildlife habitat surrounding the stream on both sides of 50<sup>th</sup> Avenue NW is of low to moderate quality, as it is dominated with box elder, common buckthorn and other species typically present in disturbed wooded settings. Upland habitat surrounding the stream is minimal; west of 50<sup>th</sup> Avenue NW is in active agricultural use and east is manicured fairways of the golf course. Planting of native vegetation within the regional pond, the stilling basin and upland buffers around each will improve upon the wildlife habitat.

In addition, information provided by the Natural Heritage Database maintained by the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service, indicated there is one known occurrence of a rare species or native plant community in the area searched by the DNR (see DNR correspondence dated June 12, 2006 in the Appendix A-2). However, based on the nature and location of the proposed project, it was determined that the project will not affect any known occurrence of rare features.

- b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site?**

☐ Yes ☒ No

**If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give**

**the correspondence reference number: Describe measures to minimize or avoid adverse impacts.**

**Response:**

State-Listed

The Minnesota Department of Natural Resources (MnDNR) Natural Heritage and Nongame Research Program was contacted to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project area as identified by section on USGS 7.5 minute quadrangle maps. In correspondence dated June 12, 2006 (ERDB 20010221-0004), the MnDNR indicated that there is one known occurrence of a rare species or native plant community in the area searched; however, based on the nature and location of the proposed project, there is not believed to be an effect on the known occurrence of this rare feature. The species/community identified is the sedimentary unit or sequence (Ordovician) #17. See copy of MnDNR Natural Heritage and Nongame Research Program correspondence in Appendix A-2.

Federal-Listed

The Mn/DOT Office of Environmental Services (OES) was contacted to review the project area for federally threatened and endangered species, and to coordinate with the US Fish and Wildlife Service for review of the project. In correspondence dated September 12, 2006, Mn/DOT OES indicated that the project area is within the distribution range of the bald eagle, Leedy's roseroot and the prairie bush clover, all federally-listed species. However, a determination of no effect was made since there is no designated critical habitat within the project area and therefore there are no known occurrences of federally-listed threatened and endangered candidate species within the project area. As such, the proposed action has no potential to have any measurable influence on federally-listed threatened and endangered species, candidate species or on the habitat for which they depend. See copy of Mn/DOT OES correspondence in Appendix A-2.

- 12. Physical impacts on water resources. Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch?**

☒ **Yes**   ☐ **No**

**If yes, identify water resource affected and give the DNR Protected Waters Inventory number(s) if the water resources affected are on the PWI. Describe alternatives considered and proposed mitigation measures to minimize impacts.**

**Response:**

Preliminary data was gathered and reviewed prior to the jurisdictional wetland delineations of potential wetland habitats in the project area. These data sources included the following:

- The National Wetlands Inventory (NWI)
- The Soil Survey of Olmsted County, Minnesota
- The Hydric Soils List for Olmsted County, Minnesota
- The Minnesota Protected Waters and Wetlands Inventory (Minnesota Department of Natural Resources)
- Recent Aerial Photographs
- U.S. Geological Service Quadrangle Maps
- Recent results of previous wetland delineations

Wetlands along the project corridor were delineated and confirmed during 2005 and 2006 field seasons. Delineation methodologies were consistent with the 1987 Army Corps of Engineers Wetland Delineation Manual. Four wetland areas are located along the project corridor shown on Figure 6 in Appendix A-1. The wetlands are mainly Type 1 (Circular 39) floodplain wetland with some Type 7 wooded swamps, with vegetation in the majority of the wetland areas dominated by reed canary grass and box elder. Surrounding uplands consist of farm fields, wooded or grassy upland including a golf course and the roadway.

A small watercourse, and the wetlands associated with this watercourse (Wetlands A and B shown on Figure 6 in Appendix A-1), will be impacted through the construction of a regional storm water pond along the west side of 50th Avenue NW at its low point, across from the Northern Hills Golf Course, a Section 4(f) property. The regional storm water pond will be an in-line pond. The length of impact from the pond to Wetland A is approximately 1500 feet. The length of impact from the pond to Wetland B is approximately 950 feet. The existing waterway is not on the MnDNR Public Waters Inventory. 50th Avenue NW will serve as a Hazard Class II Dam for the storm water pond. An overflow outlet structure will be located under 50th Avenue NW and will outlet easterly via a 6' x 8' culvert to a stilling basin in the golf course. The storm water pond is shown on the 1999 *City of Rochester Storm Water Management Plan* and is being developed in accordance with the DNR's specifications for a Hazard Class II Dam and the City's Storm water Management Plan. In addition, a small wetland in an agricultural field will be impacted for the roadway and trail construction.

A total of 5.89 acres of wetland impacts are anticipated with this proposed project. Road construction will impact 1.32 acres of Wetlands A, B, C and D, and regional storm water pond construction (north pond) will impact 4.57 acres of Wetlands A, B and C. Wetlands A, B and C were impacted during the original construction of 50th Avenue NW, with Wetland C bisected from Wetlands A and B. Wetland D is a small wetland on agricultural property through which drainage from the farm fields flows. Figure 6 in Appendix A-1 shows the approximate location of anticipated wetland impacts.

**TABLE 3**  
**WETLAND IMPACTS**

Wetland	Impact Area (in acres)	Type of Impact
Wetland A/B	0.54 4.2	Road fill Regional storm water pond
Wetland C	0.05 0.37	Road fill Storm water facility (Stilling Basin)
Wetland D	0.73	Road and trail fill
<b>Total Impact (acres)</b>	<b>5.89 acres</b>	

Two location alternatives were considered to avoid impacts to surface waters, wetlands and the Northern Hills Golf Course, a Section 4(f) property. The location alternatives include a complete avoidance alternative (Alternative B, Figure 7 in Appendix A-1) and a New Alignment Alternative (Alternative C, Figure 8 in Appendix A-1). The purpose of considering these alternatives was to try to avoid and/or minimize impacts to surface waters, wetlands and the Northern Hills Golf Course from the proposed project.

**a. Complete Avoidance Alternative (Alternative B)**

The Complete Avoidance Alternative is illustrated in Figure 7 in the Appendix A-1. This Alternative would construct the 50th Avenue NW roadway improvements along the same alignment as the Preferred Alternative. This includes shifting the centerline of the proposed roadway 50 feet west of the existing centerline, south of the golf course, to reduce overhead utility impacts and shifting the proposed roadway centerline approximately 70 feet west of the existing centerline adjacent to the golf course to completely avoid roadway impacts to the golf course. However, different than the Preferred Alternative, the Complete Avoidance Alternative would shift the location of the regional storm water retention pond and stilling basin to the south end of the project area, so as to avoid impacts to Wetlands A, B and C, to the tributary to King's Run and use of the Section 4(f) property. In this alternative, the regional storm water pond would be located along the west side of 50th Avenue NW, near the intersection of Valleyhigh Road NW (CSAH 4) and 50th Avenue NW. The regional pond would outlet under 50th Avenue NW to a stilling basin/storm water pond on the east side of 50th Avenue NW. This alternative would result in approximately 1.5 acres of wetland impact.

Complete avoidance of Wetlands A, B and C and the Northern Hills Golf Course property is not a feasible and prudent alternative because:

- i. The regional storm water pond is an integral part of the City of Rochester's Storm water Management Program, as identified on the City's Storm Water Drainage Plan 1999. Moving the location of this pond to avoid wetlands and the Section 4(f) resource would have impact on the King's Run and Cascade Creek watersheds and could cause further relocations of other storm water ponds in the in the City's Storm Water Management Plan.

- ii. Substantial re-grading and land alteration would be necessary to relocate this pond along 50th Avenue NW since the proposed location of the pond is at the low point. If the pond were moved, the adjacent lands would need to be re-graded to change the existing flow of water and create a new low-point. The type and amount of re-grading necessary to achieve this would be substantial and involve significant costs and restructuring of land along 50th Avenue NW.
- iii. Relocating the pond along 50th Avenue NW could also be difficult due to the existing development planning that is underway in the undeveloped areas along the west side of 50th Avenue NW. In particular, one General Development Plan has already been approved.
- iv. The land along Valleyhigh Road NW (CSAH 4) is prime for fringe commercial development in the future. Using this land for a City storm water pond would inhibit future commercial development in this area.

**b. New Alignment Alternative (Alternative C)**

The New Alignment Alternative, Alternative C, is illustrated in Figure 8 in Appendix A-1. This Alternative would construct the 50th Avenue NW roadway improvements and the regional storm water retention pond on a completely new alignment, for the section of the roadway adjacent to the golf course. This new alignment section would be west approximately 500 feet of the existing roadway centerline, adjacent to the golf course. As shown on Figure 8, the regional storm water pond is located west of 50th Avenue NW on its new alignment, near the low-point of the area. The roadway acts as a dam for the retention pond and an outlet to the stilling basin is located beneath the roadway. The stilling basin is located east of the proposed roadway, but does not require the use of any Section 4(f) property. This alternative would result in approximately 5.2 acres of wetland impacts.

It is not feasible or prudent to construct the road and regional storm water pond on a new alignment. The new location would result in substantial adverse social, economic and environmental impacts due to the severing of farmlands, displacement of residences, increased wetland impacts and substantial disruption of continuity with future planned extensions of 50th Avenue NW. In addition, this alternative would still require the physical alteration of surface waters in the area. The cost of constructing the project on a new alignment would be cost prohibitive and the difficulties would be of extraordinary magnitude.

**c. Preferred Alternative (Alternative A)**

Alternative A was selected as the Preferred Alternative because it minimizes impacts to surface water resources, land alteration, future development potential, storm water management and budget. In this alternative, 5.89 acres of wetlands are impacted.

Through preliminary design efforts, impacts to wetlands were minimized to the extent practicable. Complete avoidance is not possible, due to the close proximity of the



wetlands to the edge of the roadway. There are no practical location alternatives for the road and storm water pond, as previously described. Wetlands are located on either side of the existing roadway. Overall impacts to the wetlands will be minimized by maintaining a low road profile and steeper side slopes where possible. Temporary and permanent erosion control measures such as silt fencing, bio rolls, and seeding will prevent sedimentation from entering wetland areas. In addition, it is important to note that the regional storm water pond will have intangible open space/environmental benefits by providing open water and wetland upland areas for habitat.

Mitigation for the wetland impacts is required at a 2:1 ratio by the Minnesota Wetland Conservation Act and at a 1.5:1 ratio by Section 404 of the Clean Water Act [administered by the Corps of Engineers (COE)]. A total of 11.78 acres of mitigation must be provided, at least 8.84 acres of which must be New Wetland Credits (NWC) or "equivalent", in order to comply with both the WCA and COE. The remaining 2.94 acres may be Public Value Credits (PVC) or a combination of NWC and PVC. Mitigation for wetland impacts will be through off-site replacement and use of the BWSR Wetland Bank.

- 13. Water use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)?** ☐ Yes ☒ No

**If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.**

**Response:**

The proposed project is not anticipated to cause any relocations or require sealing of wells. There is currently one identified private well along the project area (Minnesota Department of Health Well #135617). The proposed project will not impact this well and it will remain open. An additional farmstead exists near the middle of the project area along the west side of 50th Avenue NW. A well is not shown on the Minnesota Department of Health's County Well Index for this site. However, the residence is not abandoned and city water services are not available at this location. Therefore, it is likely that a well does exist somewhere on the property. The project is not expected to require full acquisition of this parcel. Before construction, the City will conduct a field well inventory on this site to determine if a well exists and its location. If a relocation of the property becomes necessary and a well is found on the property, the City will work with a licensed well contractor and secure a maintenance permit from the Olmsted County Community Health Services Agency.

The City of Rochester Wellhead Protection Plan was also reviewed to determine locations of wellheads in proximity of the project area. Wellhead Protection is a way to prevent drinking water from becoming polluted by managing potential sources of contamination in

the area which supplies water to a public well. The Wellhead Protection Plan identifies a Wellhead Protection Area (WHPA) and a Drinking Water Supply Management Area (DWSMA). The WHPA and the DWSMA is the geographic areas which are to be protected and managed by the Wellhead Protection Plan

Two Rochester Public Utilities wells were identified near the 50<sup>th</sup> Avenue Phase II project area. Well No.34 is located east of the project area, along the west side of West Circle Drive (CSAH 22) near the Douglas State Trail. The majority of the northern segment of the 50<sup>th</sup> Avenue NW Phase II project area is located within the WHPA for Well No. 34. The small portion of the middle segment of roadway project is outside of the WHPA but within the DWSMA for this well also. A second wellhead is located east of the project area, along 41<sup>st</sup> Street NW near its intersection with the Douglas State Trail. The eastern boundary of the existing 50<sup>th</sup> Avenue NW corridor is outside the WHPA for this well but within the DWSMA.

- 14. Water-related land use management district. Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district?**

☐ Yes ☒ No

**If yes, identify the district and discuss project compatibility with district land use restrictions.**

**Response:**

The project will not encroach into a mapped 100-year floodplain mapped on a Federal Emergency Management (FEMA) Floodplain Insurance Rate Map (FIRM). The project is located in Zone D – areas in which flood hazards are undetermined by FEMA. However, it should be noted that there is a small unnamed tributary to King's Run that crosses the 50<sup>th</sup> Avenue NW corridor. Due to the presence of the tributary and the topography of the land, there is potential for localized flooding in a 100-year event in the area.

The storm water management facilities that are part of this project will be designed to address flood potential in the roadway area.

- 15. Water surface use. Will the project change the number or type of watercraft on any water body?**

☐ Yes ☒ No

**If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.**

**Response:** N/A

16. **Erosion and sedimentation. Give the acreage to be graded or excavated and the cubic yards of soil to be moved:**

**Response:**

Acres to be graded: 49.1 acres

Cubic yards of soil to be moved: Approximately 394,400 CY

Total Excavation: 394,400 CY

Total Embankment: 320,900 CY

**Describe any steep slopes or highly erodible soils and identify them on the site map.**

**Describe any erosion and sedimentation control measures to be used during and after project construction.**

**Response:**

The EAW Guidelines identifies steep slopes as slopes of 12 percent or greater. Construction activities that impact steep slope soils require appropriate erosion control measures. There are limited areas of steep slopes adjacent to the proposed project (refer to Figure 9 in Appendix A-1). It is anticipated that all tie-in slopes along the project corridor will be 1:3 (33.3%) slopes. There are no highly erodible soils identified within the project area.

Potential for erosion during construction exists when soils are disturbed by excavation. To minimize erosion, all exposed soils will be re-seeded or sodded as soon as possible following construction. Detailed temporary and permanent sediment and erosion control plans must be prepared in accordance with the MPCA NPDES General Storm Water Construction Permit. Erosion control measures will be implemented prior to the start of construction activities and will remain in place until site stabilization has been achieved. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared in accordance with Part III of the Phase II NPDES construction storm water permit. BMPs for erosion prevention and sediment control during construction may include, but are not limited to, silt fences and sediment traps or basins, temporary seeding and mulching, use of erosion control blankets on slopes and bio-rolls in swales and/or ditches.

The majority of excavated soil will be returned to the construction trench after placement of the storm sewer pipe and utilized in the fill areas of the project. Any excess soil will be disposed of in upland areas according to an approved grading plan where sediment will not impact water resources or other sensitive areas. Soil erosion control practices will be implemented to minimize impacts to wetlands and other surface waters in the vicinity of the Project.

17. **Water quality: surface water runoff**

- a. **Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any storm water pollution prevention plans.**

**Response:**

The southern segment of the project is comprised of agricultural and forested lands. There is a municipal golf course on the northern end of the project with more residential and urban land uses toward the intersection of 51<sup>st</sup> Street NW/Nicklaus Drive. 50th Avenue NW crosses an unnamed tributary to King's Run that flows through the golf course. Road runoff currently flows through existing ditches with no surface water treatment or rate control devices.

The proposed design of 50th Avenue NW will consist of an urban road design with storm sewer and curb and gutter. The project will result in an additional 7.1 acres of impervious surface (pavement) over existing conditions (see Table 4 for a breakdown of the drainage areas and impervious areas for the existing and proposed roadway runoff conditions). With increases in impervious surface areas associated with the addition of two lanes to 50th Avenue NW, increases in storm water runoff volumes and rates occur (see Table 5 for summary of runoff rates and volumes). Storm water runoff volume and rate increases from the surrounding development will be managed through the regional storm water pond, if possible. Any additional storm water management needs from future development that cannot be met with the regional storm water pond will need to be managed through the application of the City's Storm Water Management Plan. Road runoff will be treated conforming to current regulations (e.g., NPDES) and City of Rochester standards, such as to treat for the additional impervious surface from upgrading from the existing two-lane to a four-lane road.

Storm water ponds will be used for permanent treatment of road runoff. Storm water will be treated in two storm water treatment ponds prior to release into the adjacent receiving water bodies. The pond in the northern portion of the project area, adjacent to the Northern Hills Golf Course, is a regional pond that will impound approximately 38 acre-ft of water with a normal water level of 1063 feet AMSL. A drainage control structure will be built to regulate the pond elevation during variant storm events and will outlet easterly via a 6' x 8' box culvert into the existing channel on the Northern Hills Golf Course. A stilling basin will be constructed at the end of the culvert segment within the golf course and lined with large boulders to act as an energy dissipater to reduce erosion down stream for a 500-year storm event.

The pond to the south is located in the northeast quadrant of the intersection of 50th Avenue NW and Valleyhigh Road NW (CSAH 4). The pond will be sized to treat the road runoff and any other tributary areas that cannot bypass the pond. The dead and active pool volumes will be designed to satisfy the applicable requirements. The preliminary estimated required dead pool volume from the roadway is approximately 0.70 acre-ft with a rough surface dimension of 65 feet by 190 feet. This pond size could change however, depending upon the final road geometrics and any upstream offsite land that cannot be bypassed.

Design of the storm water treatment ponds shall conform to the following:

- Applicable Minnesota Pollution Control Agency (MPCA) permit requirements,
- City of Rochester Department of Public Works "Grading Plan Checklist" requirements, and

- City of Rochester Storm Water Management Plan guidelines.

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and submitted in accordance with Part III of the Phase II NPDES permit as described in Item No. 16. Storm Water Pollution Prevention is also addressed in design plans and during construction, such as following the NPDES requirements during construction, erosion protection on exposed soil until vegetation is established and silt fences where appropriate.

**TABLE 4**  
**ROADWAY DRAINAGE AREAS**

Location	Existing Conditions		Proposed Conditions		Difference in Pavement Areas (ac)	% Change in Pavement Area(a)
	Drainage Area (ac)	Existing Pavement Surface Area (ac)	Drainage Area (ac)	Proposed Pavement Surface Area (ac)		
High Point to the North	785	2.8	785	6.1	3.3	118%
High Point to the South	111.1	1.4	111.6	5.2	3.8	271%
TOTAL	896.1	4.2	896.6	11.3	7.1	169%

(a) Calculated as (Proposed Pavement Surface Area – Existing Pavement Surface Area) ÷ Existing Pavement Surface Area.

**TABLE 5**  
**EXISTING AND PROPOSED RUNOFF RATE AND VOLUME FROM BASIN MODELING DATA**

Storm Event	High Point to the South				
	Existing Runoff Rate (cfs)	Increase in Roadway Runoff (cfs)	Proposed Runoff Rate (cfs)	Existing Runoff Volume (acre-feet)	Proposed Runoff Volume (acre-feet)
2-Year	79.8	6.0	79.8	8.4	8.9
10-Year	182.5	8.9	182.5	18.0	18.8
100-Year	329.3	11.3	329.3	31.9	33.0

Storm Event	High Point to the North (a)					
	Existing Runoff Rate (cfs)	Increase in Drainage Area Runoff (cfs)	Increase in Roadway Runoff (cfs)	Proposed Runoff Rate (cfs)	Existing Runoff Volume (acre-feet)	Proposed Runoff Volume (acre-feet)
2-Year	151	17.9	9.9	27.3	41.4	66.8
10-Year	386	83.5	14.8	98.5	92.1	129.3
100-Year	814	169.8	18.9	382.6	182.3	232.7

(a) The existing rates and volumes are the pre-development numbers. The proposed rates and volumes are the future post-development numbers. The large decrease from the existing to proposed runoff rates is due to the regional pond.

**18. Water quality: wastewaters**

- a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.**

**Response:** N/A

- b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.**

**Response:** N/A

- c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.**

**Response:** N/A

- d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.**

N/A

**19. Geologic hazards and soil conditions**

- a. Approximate depth (in feet) to ground water: 0 feet minimum, >6 feet average; to bedrock: 56 feet minimum, 85 feet average.**

*Source: Soil Survey of Olmsted County (USDA March 1980)*

**Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.**

**Response:**

The Olmsted County Geologic Atlas for this area indicates a low probability of sinkholes.

The area of this project appears to be loess covered, geologically part of the gray drift area of the pre-Wisconsin glaciation outwash period. Soil borings completed to limestone bedrock penetrated at least 56 feet of overburden materials from the northwest elevations of the site. Therefore, this site would not be considered as karst topography.

- b. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

**Response:**

The *Soil Survey of Olmsted County (USDA March 1980)* indicates the following soils occur within the project area:

**TABLE 6**  
**SOIL TYPES**

Soil Symbol	Soil Name	Percent Slope
30B	Kenyon loam	1 to 6%
99C	Racine silt loam	6 to 12%
99D2	Racine loam	12 to 18%
176	Garwin silty clay loam	
244C	Lilah sandy loam	6 to 12%
285B	Port Byron silt loam	1 to 5%
285C	Port Byron silt loam	5 to 9%
289	Radford silt loam	
301B	Lindstrom silt loam	2 to 6%
322C	Timula silt loam	6 to 12%
322D	Timula silt loam	12 to 18%
369C	Waubeek silt loam	6 to 12%
468	Otter silt loam	
477B	Littleton silt loam	1 to 4%
479	Floyd silt loam	1 to 4%

Source: Soil Survey of Olmsted County (USDA March 1980)

According to the *Soil Survey of Olmsted County (USDA March 1980)*, the project area is located on the Racine-Floyd-Maxfield and Timula-Port Byron Associations. The Racine-Floyd-Maxfield Association, found on the northern portion of the project site, consists of nearly level to moderately steep, well-drained to poorly drained silty soils on uplands and in upland drainage ways. This association has slopes ranging from 0 to 18 percent. Most of the soils within this association are suitable for farming (corn, small grains and soybeans). Some of the wetter soils are suitable for wetland wildlife habitat. The main concern associated with this association is erosion of its gently sloping to steep slopes of the Racine soils and the internal drainage in the wetter Floyd and Maxfield soils.

The Timula-Port Byron Association, found on the middle and southern portion of the project site, consists of nearly level to very steep, well-drained silty soils on uplands. These soils are often found on summits and in drainage ways with slopes ranging from 0 to 30 percent. Most of the soils within this association are suitable for cropland (corn, small grains and soybeans). The main concern associated with these soils is erosion in the steep

sloping areas.

### **Potential for Groundwater Contamination**

The Olmsted County Geologic Atlas identifies this area's sensitivity to groundwater pollution as low or low to moderate. The proposed project involves limited use of contaminants (primarily fuel for construction activities) and thus there is limited potential for soil contamination. If a spill were to occur during construction, appropriate action to remediate the situation would be taken immediately in accordance with MPCA guidelines and regulations (see also Item No. 20. subpart C).

## **20. Solid wastes, hazardous wastes, storage tanks**

- a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.**

### **Response:**

No municipal solid waste or hazardous waste is expected to be generated by the proposed project. If a spill of hazardous or toxic substances should occur during construction of the proposed project, it is the responsibility of the construction company to notify the Minnesota Duty Officer and respond according to MPCA containment and remedial action procedures.

The removal of existing roadway pavement and the excavation of soil materials for the new improvements will be necessary. Removed pavement and soil materials will become the property of the contractor, who may recycle the materials for use in the project or may use the materials for another project. Any contaminated materials identified within the construction area will be treated in accordance with MPCA requirements prior to reuse or disposal. If suitable, topsoil removed for the construction of the project will be salvaged for reuse and placed in areas where turf and landscaping will be located. Any disposal of excess pavement materials will be done in compliance with state and local solid waste regulations. Offsite placement of excess soil materials must be done at a site with an approved grading plan. There will be no disposal of excess materials into wetlands, floodplains or other sensitive areas.

No animal manure, sludge or ash will be produced as part of this project.

- b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.**



**Response:**

The Minnesota Pollution Control Agency (MPCA) inventory of contaminated properties in Minnesota was searched for potentially hazardous spills in the study area. The inventory includes properties that have already been investigated and cleaned up, as well as those currently enrolled in MPCA cleanup programs. No properties are located in the project area or within close proximity to the project. In addition to the MPCA inventory, the City of Rochester was contacted regarding any known or potential environmental hazards in this area. City staff was not aware of any hazards.

Toxic or hazardous materials will not be present at the site, except for fuel and oil necessary for the construction equipment during construction. In the event that a leak or spill occurs during construction, appropriate action to remediate the situation will be taken immediately in accordance with MPCA guidelines and regulations.

- c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.**

**Response:**

No above or below ground storage tanks are planned for permanent use in conjunction with this project. No existing storage tanks are located within the project area or will be impacted or require relocation in conjunction with this project.

Temporary storage tanks for petroleum products may be located in the project area, if allowed, for the purpose of refueling and servicing construction equipment during roadway construction. Appropriate measures will be taken during construction to avoid spills that could contaminate groundwater or surface water in the project area. In the event that a leak or spill occurs during construction, appropriate action to remediate the situation would be taken immediately in accordance with MPCA guidelines and regulations.

**21. Traffic**

**Parking spaces added: N/A**

**Existing spaces (if project involves expansion): N/A**

**Estimated total average daily traffic generated:**

**2035 Build Conditions = 10,200 to 12,300 ADT**

**Estimated maximum peak hour traffic generated (if known) and time of occurrence:**  
**N/A**

**Provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.**

**Response:**

ROCOG, the Metropolitan Planning Organization for the City of Rochester, anticipates a 41 percent increase in population and a 50 percent increase in employment by 2035 in the Rochester metro area. (*Approximately 21.5 percent of the projected population increase has already materialized in the five years since the Year 2000 Census.*) By 2035, vehicle miles of travel (VMT) and vehicle hours traveled (VHT) generated from this growth is expected to increase by 92 percent and 102 percent respectively. Because of these growth expectations, ROCOG has identified in their long range transportation plan a system of supporting arterial roadways. 50th Avenue NW is shown in the 2035 plan as an urban four-lane major urban arterial. This ROCOG classification is reserved for arterial roadways that serve to improve the connectivity of the overall network on a localized basis.

Existing traffic volumes along 50th Avenue NW in the project area are approximately 2,500 vehicles per day. ROCOG developed 2035 traffic forecasts based upon the land use assumptions of the *2035 Long Range Transportation Plan*. The 2035 traffic forecasts for 50th Avenue NW in this area are approximately 10,200 to 12,300 vehicles per day.

As part of the reconstruction of 50th Avenue NW, an informal Intersection Control Evaluation (ICE) was completed to determine the most effective intersection control to serve future traffic volumes and maintain safe operations. The following key intersections were evaluated along 50th Avenue NW:

- 50th Avenue NW at the Proposed Parkway (future east/west collector roadway)
  - 50th Avenue NW at Badger Hills Drive (future east/west collector roadway)
  - 50th Avenue NW at Valleyhigh Road NW (CSAH 4) (existing east/west collector/arterial\* roadway)
- \*Valleyhigh Road NW (CSAH 4) has a federal functional classification of minor arterial east of 50th Avenue NW and a rural major collector, west of 50th Avenue NW.

The proposed roadway is a four-lane divided urban roadway without shoulders, which will be classified as a major urban arterial route with posted speeds of 45 mph.

## TRAFFIC CONTROL ALTERNATIVES ANALYSIS

Intersection controls that were evaluated (based on overall operations, capacity, and intersection safety) include:

- Side-Street Stop Control
- All-Way Stop Control
- Traffic Signal Control
- Double-Lane Roundabout

Forecast traffic volumes used in the analysis were developed for year 2035. For each traffic control alternative, specific lane configurations were assumed. A preliminary analysis indicated that approaches without turn lanes, under the stop and traffic signal

control, would operate poorly. Therefore, appropriate turn lanes were assumed for each approach under these alternatives (see Figures 10, 11 and 12). Also, it should be noted that a double-lane roundabout was reviewed since 50th Avenue NW is proposed as a four-lane roadway.

Tables 7, 8, and 9 show the overall levels of service (LOS) and volume to capacity (v/c) ratios for each of the intersections proposed along reconstructed 50th Avenue NW. Synchro/SimTraffic was used to analyze the stop and signalized controls. The FHWA planning level methodology analysis was used to analyze the roundabout option. Since the standard traffic control and roundabout analysis methodologies are different, care should be exercised when directly comparing the results.

**TABLE 7**  
**YEAR 2035 TRAFFIC ANALYSIS**  
**50TH AVENUE NW AND PROPOSED PARKWAY INTERSECTION**

Control Type	A.M. PEAK		P.M. PEAK	
	LOS	V/C	LOS	V/C
Side-Street Stop (WB/EB) <sup>(1)</sup>	A/D	0.40	C/F <sup>(2)</sup>	0.79
All-Way Stop	B	0.39	C	0.57
Traffic Signal	B	0.23	B	0.28
Double-Lane Roundabout	-- <sup>(3)</sup>	0.20	-- <sup>(3)</sup>	0.27

<sup>(1)</sup> The overall LOS is followed by the worst approach LOS.

<sup>(2)</sup> Average side-street delay is approximately 70 seconds per vehicle.

<sup>(3)</sup> LOS is not defined for roundabouts in the Highway Capacity Manual. Therefore, v/c ratios were reported.

Based on the analysis results shown in Table 7, all the modeled traffic control methods will accommodate year 2035 traffic volumes at the 50th Avenue NW/Proposed Parkway intersection. The intersection will operate acceptably with side-street stop control (EB/WB); however, it is typical of intersections with higher mainline traffic volumes to experience higher delays (poor levels of service) on the side-street stop-controlled approaches, but acceptable overall intersection level of service during peak hour periods. This is why the side-street LOS F is considered acceptable operations during the forecast year 2035 p.m. peak hour since the overall intersection LOS is B, and the average delay is just over one minute per vehicle. Therefore, side-street stop control is an appropriate traffic control method based on the side-street approach volumes.

**TABLE 8 – YEAR 2035 TRAFFIC ANALYSIS  
50TH AVENUE NW AND PROPOSED BADGER HILLS DRIVE INTERSECTION**

Control Type	A.M. PEAK		P.M. PEAK	
	LOS	V/C	LOS	V/C
Side-Street Stop (WB/EB) <sup>(1)</sup>	B/E	0.73	<b>F/F<sup>(2)</sup></b>	<b>1.62</b>
All-Way Stop	B	0.44	C	0.65
Traffic Signal	B	0.26	B	0.31
Double-Lane Roundabout	-- <sup>(3)</sup>	0.23	-- <sup>(3)</sup>	0.29

<sup>(1)</sup> The overall LOS is followed by the worst approach LOS.

<sup>(2)</sup> Average side-street delay is over 5 minutes per vehicle.

<sup>(3)</sup> LOS is not defined for roundabouts in the Highway Capacity Manual. Therefore, v/c ratios were reported.

Based on the analysis results shown in Table 8, side-street stop control will not accommodate year 2035 traffic volumes at the 50th Avenue NW/Badger Hills Drive intersection. Additionally, since the volumes are not very well balanced between the north/south and the east/west approaches, an all-way stop control is not recommended at the intersection. Therefore, a traffic signal or a double-lane roundabout is the recommended traffic control type for the 50th Avenue NW/Badger Hills Drive intersection. Each of these two traffic control methods will accommodate year 2035 volumes.

**TABLE 9 – YEAR 2035 TRAFFIC ANALYSIS  
50TH AVENUE NW AND VALLEYHIGH ROAD NW (CSAH 4) INTERSECTION**

Control Type	A.M. PEAK		P.M. PEAK	
	LOS	V/C	LOS	V/C
Side-Street Stop (WB/EB) <sup>(1)</sup>	<b>F/F<sup>(2)</sup></b>	<b>5.52</b>	<b>F/F<sup>(2)</sup></b>	<b>16.05</b>
All-Way Stop	<b>E</b>	<b>0.94</b>	<b>F</b>	<b>1.48</b>
Traffic Signal	C	0.55	C	0.59
Double-Lane Roundabout	-- <sup>(3)</sup>	0.37	-- <sup>(3)</sup>	0.43

<sup>(1)</sup> The overall LOS is followed by the worst approach LOS.

<sup>(2)</sup> Average side-street delay is 10 minutes per vehicle.

<sup>(3)</sup> LOS is not defined for roundabouts in the Highway Capacity Manual. Therefore, v/c ratios were reported.

Based on the analysis results shown in Table 9, neither of the stop control methods will accommodate year 2035 traffic volumes at the 50th Avenue NW/Valleyhigh Road NW (CSAH 4) intersection. This intersection is recommended for immediate preparation for a traffic signal or double-lane roundabout. Each of the two traffic control methods will accommodate year 2035 volumes.

## OTHER CONSIDERATIONS

The intersection traffic control device selected (traffic signal or double-lane roundabout) should have little or an insignificant impact on adjacent intersections. The proposed intersections are relatively close to one another (approximately 1/3 mile). Therefore, care should be exercised when selecting traffic control devices along the corridor to maintain system continuity.

Factors that will affect the geometric design include the locations of drainage ponds, impacts to right-of-way, and changes in existing roadway alignments and profiles. The proposed intersections will also need to accommodate truck traffic. The traffic signal and double-lane roundabout alternatives could be designed to accommodate tractor-trailer traffic.

Safety is a major component in determining the most effective traffic control for an intersection. While both the traffic signal and double-lane roundabout provide for the orderly flow of traffic, national literature and research has shown that roundabouts will minimize the severity and reduce the frequency of most types of crashes. The double-lane roundabout also introduces a form of speed control for this route, which can have additional safety benefits. One potential safety issue with a double-lane roundabout is the change in grades. The grades may decrease safe stopping-sight distances and may be too steep entering into the double-lane roundabout. This issue should be evaluated as part of the design feasibility process. Another potential issue is pedestrian crossing accommodations. Roundabouts do not stop traffic and therefore, pedestrian crossing issues need to be dealt with appropriately. This should be carefully evaluated as part of the design process since pedestrian trails are planned for both sides of the roadway.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the operations and capacity analyses, all four of the intersection control alternatives are feasible at the 50th Avenue NW/Proposed Parkway intersection. Therefore, if all of the design issues are similar between the alternatives, side-street stop-control on the east and westbound approaches of the Proposed Parkway would be the recommended traffic control at the 50th Avenue NW/Proposed Parkway intersection.

The analyses indicated that while three intersection control alternatives (all-way stop, traffic signal, and double-lane roundabout) are feasible at the 50th Avenue NW/Badger Hills Drive intersection, an all-way stop control is not recommended at the intersection. Therefore, a traffic signal or a double-lane roundabout is recommended at the 50th Avenue NW/Badger Hills Drive intersection since the entering volumes are not well balanced.

Based on the operations and capacity analyses, neither of the stop control methods will accommodate year 2035 traffic volumes at the 50th Avenue NW/Valleyhigh Road NW (CSAH 4) intersection. This intersection is recommended for immediate preparation for a traffic signal or double-lane roundabout. Each of the two traffic control methods will accommodate year 2035 volumes.

The intersection traffic control device ultimately selected at the 50th Avenue NW intersections with Badger Hills Drive and Valleyhigh Road NW (CSAH 4) – traffic signal or double-lane roundabout – should have little or an insignificant impact on adjacent intersections. The proposed intersections are relatively close to one another (approximately 1/3 mile). Therefore, care should be exercised when selecting traffic control devices along the corridor to maintain system continuity.

- 22. Vehicle-related air emissions. Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.**

**Response:**

*Methodology and Assumptions*

Motor vehicle air quality issues are most frequently associated with carbon monoxide (CO) emissions and the concentrations of those emissions. The MPCA's 1-hour and 8-hour standards for CO concentrations are 30 parts per million (ppm) and 9 ppm, respectively.

Concentrations of CO are generally highest at intersections with poor levels of service and, consequently, more idling vehicles. An air quality analysis was performed to predict carbon monoxide concentrations at the worst performing intersections in the project area. The air quality analysis incorporates the worst-case scenario of projected afternoon peak hour traffic volumes representing conditions for the year 2035. Carbon monoxide concentrations were projected using the Environmental Protection Agency (EPA) Mobile 6 emission model and the CAL3QHC dispersion model.

The modeling assumptions used in this analysis were as follows:

Analysis Year:	2035
Traffic Mix:	National default values
Cruise Speed:	Posted speed limits
Cold Start Percentage:	20.6 percent for all traffic
Hot Start Percentage:	27.3 percent for all traffic
Wind Speed:	1 meter/second
Temperature:	-8.8 degrees Celsius
Surface Roughness:	108 centimeters
Stability Class:	D
Inspection Maintenance:	No
Oxygenated Fuel:	Ethanol with 2.7 percent oxygen content
Fuel Program	Convention Gasoline East
Fuel Reid Vapor Pressure	9.0 lbs/square inch
Eight Hour Persistence Factor:	0.7
Wind Direction:	36 directions at 10 degree intervals

## Background CO Levels

Default Background CO concentrations were obtained from the Minnesota Pollution Control Agency. For purposes of the analysis, these background concentrations were adjusted for region-wide increases in traffic volumes (using traffic growth factors based on traffic forecast modeling). To represent worst-case conditions, there were no reductions of background concentrations to account for vehicle emissions and temperature. The results are summarized in Table 10.

**TABLE 10**  
**CALCULATION OF CO BACKGROUND CONCENTRATIONS**

Factor	2035	
	1-Hour Average	8-Hour Average
2006 Default Background Concentration (ppm)	3.0	2.0
Background Traffic Volume Adjustment Factor	1.77	1.77
Worst-Case Background Concentration (ppm)	5.3	3.5

## Carbon Monoxide Modeling Results

Carbon monoxide analysis was performed at the intersection of 50th Avenue NW and the Badger Hills Drive. Future CO concentrations were analyzed based on forecast peak hour traffic volumes and proposed intersection geometrics. Analyses were performed for the year 2035.

Table 11 presents the worst-case CO concentrations at the modeled intersection. Ten receptors were modeled, representing likely locations of human activity around the intersection. The wind direction column indicates the wind direction that resulted in the worst-case conditions for that analysis location and time. The 1-hour and 8-hour average modeling results are well below the state standards for all conditions modeled.

**TABLE 11**  
**FUTURE MODELED CARBON MONOXIDE CONCENTRATIONS**

Receptor	One-Hour Average (ppm)	Eight-Hour Average (ppm)	Wind Direction (degrees)
<b>50th Avenue and Proposed Parkway</b>			
Northeast Quadrant: Trail to near North	5.5	3.6	190
Northeast Quadrant: Trail to far North	5.6	3.7	220
Northwest Quadrant: Trail to near North	5.5	3.6	30
Northwest Quadrant: Trail to far North	5.6	3.7	140
Southeast Quadrant: Trail to South	5.6	3.7	200
Southeast Quadrant: Trail to East	5.3	3.5	0
Southwest Quadrant: Trail to South	5.6	3.7	160
Southwest Quadrant: Trail to West	5.3	3.5	0
Southwest Quadrant: House	5.5	3.6	150
Southwest Quadrant: Barn	5.5	3.6	150

## Conclusions

Predicted CO concentrations at the analyzed intersection will be below state standards after completion of the project in 2007. Based upon the traffic analysis and CO analysis, the project will not result in adverse impacts on air quality; therefore, no mitigation is warranted.

23. **Stationary source air emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult EAW Guidelines for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality

Response: N/A

24. **Odors, Noise and Dust**

Will the project generate odors, noise or dust during construction or during operation? ☒ Yes ☐ No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

### Odors and Dust During Construction



The proposed project is not anticipated to generate any unusual odors during construction. Dust normal to construction will occur as a result of the proposed project. Dust generated during construction will be minimized through standard dust control measures such as watering and limiting the extent and duration of exposed soil conditions. After construction is complete, dust levels are anticipated to be minimal because all soil surfaces will either be paved or revegetated.

## **Construction Noise**

### **Background**

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels represent the logarithmic measure of sound energy relative to a reference energy level. For highway traffic noise, an adjustment, or weighting, of the high- and low-pitched sounds is made to approximate the way that an average person hears sounds. The adjusted sound levels are stated in units of “A-weighted decibels” (dBA). In an outdoor setting, a sound increase of three dBA is barely perceptible to the human ear, a five dB increase is clearly noticeable, and a 10 dBA increase is heard twice as loud. For example, if the sound energy is doubled (e.g., the amount of traffic doubles), there is a three dBA increase in noise, which is just barely noticeable to most people. On the other hand, if the source of the sound increases to where there is 10 times the sound energy level over a reference level, then there is a 10 dBA increase and it is heard as twice as loud.

### **Construction Activities**

The construction activities associated with implementation of the proposed project will result in increased noise levels relative to existing conditions. These impacts will primarily be associated with construction equipment. Noise impacts caused by construction activities in the project area will depend upon the type of equipment in use, the location of the equipment on the construction site, the operating mode of the equipment and the proximity of receptors. During a typical work cycle, construction equipment may be idling, preparing to perform a task, or operating under full load. It may be congregated in a specific area or spread out over a larger area. For this reason, the total noise impact on a single receiver point resulting from construction of the project will vary both day-to-day and hour-to-hour.

The following table (Table 12) shows peak noise levels monitored at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, generally the roadway construction phase associated with the greatest noise levels. Other than construction workers, noise receptors will be golfers or area residents generally located between 100 to 200 feet from the project.

**TABLE 12**  
**TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS AT 50 FEET**

Equipment Type	Manufacturers Sampled	Total Number of Models in Sample	Peak Noise Level (dBA)	
			Range	Average
Backhoes	5	6	74-92	83
Front Loaders	5	30	75-96	85
Dozers	8	41	65-95	85
Graders	3	15	72-92	84
Scrapers	2	27	76-98	87
Pile Drivers	N/A	N/A	95-105	101

Source: United States Environmental Protection Agency and Federal Highway Administration.

Elevated noise levels are to a degree unavoidable for this type of project. The City of Rochester will require that construction equipment be properly muffled and that the contractor(s) comply with applicable local noise restrictions. Generally, excavating and paving operations are conducted only during daytime hours. In accordance with Rochester ordinances, construction activities (i.e., construction noise) will not occur between the hours of 10:00 p.m. and 7:00 a.m. unless a permit has been obtained to allow construction activities outside of these hours.

### **Traffic-Related Noise Analysis**

#### **Background**

In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10 percent and 50 percent of the time during the hour of the day and/or night that has the heaviest traffic. These numbers are identified as the L10 and L50 levels. The following chart provides a rough comparison of the noise levels of some common noise sources:

Sound Pressure Level (dBA)	Noise Source
140-----	Jet Engine (at 75 feet)
130-----	Jet Aircraft (at 300 feet)
120-----	Rock and Roll Concert
110-----	Pneumatic Chipper
100-----	Jointer/Planer
90-----	Chainsaw
80-----	Heavy Truck Traffic
70-----	Business Office
60-----	Conversational Speech
50-----	Library
40-----	Bedroom
30-----	Secluded Woods
20-----	Whisper

Source: "A Guide to Noise Control in Minnesota," Minnesota Pollution Control Agency, <http://www.pca.state.mn.us/programs/pubs/noise.pdf> and "Highway Traffic Noise," FHWA, <http://www.fhwa.dot.gov/environment/htnoise.htm>.

Along with the volume of traffic and other factors (i.e., topography of the area and vehicle speed) that contribute to the loudness of traffic noise, the distance of a receptor from a sound's source is also an important factor. Sound levels decrease as distance from a source increases. The following rule of thumb regarding sound decreases due to distance is commonly used: "Beyond approximately 50 feet, each time the distance between a line source (such as a road) and a receptor is doubled, sound levels decrease by three decibels over hard ground, such as pavement or water, and by four and one half decibels over vegetated areas." For example, if the sound level is 70 dBA at 50 feet from a line source, it will then be 67 dBA at 100 feet from the line source and 64 dBA at 200 ft from the line source.<sup>1</sup>

## Regulatory Framework

The MPCA is the governmental regulatory agency responsible for implementing regulations controlling traffic noise in Minnesota. Minnesota State noise standards have been established specifically for daytime and nighttime periods for residential land uses (Noise Area Classification 1 or NAC-1), the Minnesota State standards for L10 are 65 dBA for daytime and 55 dBA for nighttime; the standards for L50 are 60 dBA for daytime and 50 dBA for nighttime.

County and City roads outside the cities of Minneapolis and St. Paul are exempt from the state noise standards, except for roadways where full control of access has been acquired. Because 50th Avenue NW is a City of Rochester road with existing direct private driveway connections, it is exempt from State noise standards. State noise standards are provided in Table 13 for comparison purposes only.

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<sup>1</sup> "A Guide to Noise Control in Minnesota", revised March 1999, Minnesota Pollution Control Agency, <http://www.pca.state.mn.us/programs/pubs/noise.pdf>.

**TABLE 13**  
**MINNESOTA STATE NOISE STANDARDS**

<b>MPCA State Noise Standards</b>					
<b>Land Use</b>	<b>Code</b>	<b>Daytime (7 a.m. – 10 p.m.) dBA</b>		<b>Nighttime (10 p.m. – 7 a.m.) dBA</b>	
<b>Residential</b>	<b>NAC-1</b>	L10 of 65	L50 of 60	L10 of 55	L50 of 50
<b>Commercial</b>	<b>NAC-2</b>	L10 of 70	L50 of 65	L10 of 70	L50 of 65
<b>Industrial</b>	<b>NAC-3</b>	L10 of 80	L50 of 75	L10 of 80	L50 of 75

### **Traffic Noise Analysis**

A noise analysis was completed to assess existing traffic noise levels in the project area and to determine what effect the proposed project will have on future noise levels. The noise analysis consisted of modeling existing (year 2006) and future (year 2035) noise levels at adjacent residential receptor sites.

Five noise modeling receptors (R1-R5) were identified to represent residential sites in the project area. Noise modeling receptors were identified to represent those areas most sensitive to potential traffic noise impacts resulting from construction of the proposed project (sites closest to 50th Avenue NW). Receptor locations are illustrated in Figure 13 in Appendix A-1. All receptor sites are classified within the definition of State Land Use Code NAC-1.

Noise modeling was completed using the noise prediction program “MINNOISE”, a version of the FHWA “STAMINA” model adapted by Mn/DOT and approved by the MPCA. This model uses vehicle numbers, vehicle speed, class of vehicle (cars, medium trucks, heavy trucks) and the typical characteristics of the roadway being analyzed. Noise modeling was completed for the peak traffic daytime and nighttime hour. Projected traffic volumes for peak daytime and nighttime hours for year 2035 were used to predict future noise levels. The peak traffic daytime period typically corresponds to the afternoon rush hour. The nighttime peak traffic time period typically corresponds to the hour just prior to the morning rush hour (generally from 6:00 to 7:00 a.m.). The vehicle percentage used in the noise model was 97 percent cars, 2 percent medium trucks, and 1 percent heavy trucks. Posted speed limits were used to model all roads under existing and year 2035 conditions.

### **Results**

Daytime noise modeling results are presented in Table 14. Nighttime noise modeling results are presented in Table 15. Year 2035 daytime traffic noise levels (L10) are anticipated to increase by 6 to 8 dBA over existing levels for the receptor sites modeled along 50th Avenue NW under No Build conditions. Year 2035 daytime traffic noise levels (L10) are anticipated to increase by 5 to 11 dBA over existing levels for the receptor sites modeled along 50th Avenue NW under Build conditions. Increases in year 2035 nighttime traffic noise levels (L10) are similar to those experienced during the daytime. The

increases in traffic noise from existing to year 2035 conditions can be attributed to the increases in traffic volumes along 50th Avenue NW.

Daytime noise levels (L10) are relatively similar along the corridor, with the highest modeled daytime noise levels observed at Receptors R1 and R4, which are also influenced by traffic noise from 51st Street. Receptors R3 and R4 experience a greater traffic noise increase (3-4 dBA; L10) with construction of the proposed project relative to year 2035 No Build conditions because the 50th Avenue NW alignment is shifted to the west closer to these receptors. Conversely, Receptors R2 and R5 are anticipated to experience a small decrease in traffic noise (1-3 dBA, L10) with construction of the proposed project relative to year 2035 No Build conditions because the 50th Avenue NW alignment is shifted away from these receptors.

### **Conclusions**

In general, daytime traffic noise levels will increase between six and eight dBA from existing (2006) to future (2035) No Build conditions. Construction of the proposed project will result in increases in traffic noise similar to those experienced under No Build conditions, due to increased traffic volumes. With construction of the proposed project, traffic noise levels are anticipated to increase between seven and nine dBA (L10) from existing (2006) to year 2035 conditions.

**25. Nearby resources. Are any of the following resources on or in proximity to the site?**

Archaeological, historical or architectural resources? ☐ Yes ☒ No

Prime/unique farmlands or land within agricultural preserve? ☒ Yes ☐ No

Designated parks, recreation areas or trails? ☒ Yes ☐ No

Scenic views and vistas? ☐ Yes ☒ No

Other unique resources? ☐ Yes ☒ No

**If yes, describe the resource and identify any project-related impacts on the resource.**

**Response:**

Archaeological, historical or architectural resources

The Mn/DOT Office of Environmental Service- Cultural Resources Unit (CRU) determined that there will be no historic properties affected by the project. Refer to Appendix A-2 for a copy of the Mn/DOT OES correspondence dated July 25, 2006.

**TABLE 14**  
**TRAFFIC NOISE MODELING RESULTS: DAYTIME**

Receptor*	Existing (2006)		No Build (2035)		Difference Between Existing (2006) and No Build (2035)		Build (2035)		Difference Between Existing (2006) and Build (2035)	
	L10	L50	L10	L50	L10	L50	L10	L50	L10	L50
R1 (1)	59	49	<b>67</b>	59	8	10	<b>67</b>	59	8	10
R2 (5)	60	49	<b>67</b>	59	7	10	<b>66</b>	58	6	9
R3 (1)	57	48	63	57	6	9	<b>66</b>	59	9	11
R4 (1)	56	47	63	57	7	10	<b>67</b>	60	11	13
R5 **	58	49	<b>66</b>	59	8	10	63	57	5	8
<b>State Standards</b>	65	60	65	60	-	-	65	60	-	-

**Bold** numbers are above State noise standards for residential land uses.

\* - number in ( ) in this column indicates the number of residences represented by each receptor.

\*\* - Receptor R5 represents a planned residential site east of 50th Avenue NW.

**TABLE 15**  
**TRAFFIC NOISE MODELING RESULTS: NIGHTTIME**

Receptor*	Existing (2006)		No Build (2035)		Difference Between Existing (2006) and No Build (2035)		Build (2035)		Difference Between Existing (2006) and Build (2035)	
	L10	L50	L10	L50	L10	L50	L10	L50	L10	L50
R1 (1)	<b>56</b>	45	<b>64</b>	<b>55</b>	8	10	<b>64</b>	<b>55</b>	8	10
R2 (5)	<b>56</b>	45	<b>64</b>	<b>54</b>	8	9	<b>63</b>	<b>54</b>	7	9
R3 (1)	53	43	<b>60</b>	<b>52</b>	7	9	<b>63</b>	<b>55</b>	10	12
R4 (1)	53	43	<b>61</b>	<b>53</b>	8	10	<b>63</b>	<b>55</b>	10	12
R5 **	55	45	<b>63</b>	<b>55</b>	8	10	<b>60</b>	<b>52</b>	5	7
<b>State Standards</b>	55	50	55	50	-	-	55	50	-	-

Bold numbers are above State noise standards for residential land uses.

\* - number in ( ) in this column indicates the number of residences represented by each receptor.

\*\* - Receptor R5 represents a planned residential site east of 50th Avenue NW.

The determination was forwarded to the State Historic Preservation Office (SHPO). As there are no historic properties within the area of potential effect, the Section 106 review is complete and no SHPO comment period and response are required under the terms of the new Programmatic Agreement. Refer to a copy of this correspondence in Appendix A-2 dated July 25, 2006.

Prime or unique farmlands or land within an agricultural preserve

Because there are Prime and Statewide Important soils present in the project area, a Farmland Conversion Impact Rating form for Corridor Type Projects (NRCS-CPA-106) was completed for the proposed project and sent to the Regional Service Center of the NRCS for agency review. Refer to Appendix A-2 for a copy of the correspondence. The completed NRCS-CPA-106 form assigned the alignment a total impact rating of 134 points. Under 7 CFR 658.4(c)(2), sites receiving a total score of less than 160 need not be given further consideration for protection, and no additional sites need be evaluated.

Designated parks, recreation areas or trails

The proposed project will impact the Northern Hills Golf Course, a Section 4(f) resource.

The Northern Hills Golf Course is a municipal course open to the public and is therefore a Section 4(f) resource. The golf course is approximately 133 acres located near the north end of the project area along the eastern side of 50th Avenue NW. The roadway currently runs adjacent to approximately 1000 feet of tee boxes and fairway of the sixth hole. The regional storm water pond on the west side of 50th Avenue NW will have an overflow structure under 50th Avenue NW and will outlet easterly via a 6' x 8' box culvert into a stilling basin within the Northern Hills Golf Course. The proposed stilling basin will use approximately 3.95 acres of the golf course. The stilling basin is viewed by the City of Rochester and the City's Park and Recreation Department as an amenity to the course. Through the development of the stilling basin, several safety hazards will be corrected within the golf course. Therefore, a Net Benefits Programmatic Section 4(f) Evaluation has been prepared. This evaluation shows the proposed project will provide benefits to the golf course and will not impact the function of the Northern Hills Golf Course. Public comments on the use of this Section 4(f) property will be accepted during a public hearing at a Rochester City Council meeting in May 2007.

- 26. Visual impacts. Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? \_\_Yes XNo**

**If yes, explain.**

**Response:** N/A

- 27. Compatibility with plans and land use regulations. Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency?**

**X Yes \_\_No**



**If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.**

**Response:**

The proposed roadway reconstruction project is compatible with existing plans and land use regulations. It will occur in an existing transportation corridor. The need for the reconstruction of 50th Avenue NW is documented in the *ROCOG 2035 Long Range Transportation Plan* (August 2005) and the 2005-2010 *City of Rochester Capital Improvements Plan*. The storm water ponds are addressed in the 1999 *City of Rochester Storm Water Management Plan*. The corridor is located within the designated Rochester Urban Service Area of the Olmsted County and City of Rochester land use plans as amended.

- 28. Impact on infrastructure and public services. Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project?**

**X** Yes    \_\_\_ No

**If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)**

**Response:**

Future development in this area will construct roads that intersect with 50th Avenue NW. Water and sewer utilities will cross the corridor in locations of future road accesses in order to serve future development.

Existing sanitary sewer manholes within the construction limits will be adjusted to match the new grade per City of Rochester standards. The existing sanitary sewer line crossing 50th Avenue NW at the golf course will be realigned and the existing westerly sanitary manhole will be relocated to the east to avoid conflict with the proposed regional storm water pond. New sanitary sewer lines will be extended to the north and south of this manhole along 50th Avenue NW and stubbed out to the west at the proposed future road locations for future developments.

There is an existing watermain crossing 50th Avenue NW at the northern end of the project area. This watermain will possibly be extended to the south and west for future development connections. Watermains may also be placed under 50th Avenue NW at future road locations for development connections.

Rochester Public Utilities has an existing overhead transmission line located on the east side of 50th Avenue NW just inside the existing roadway right-of-way. Approximately three of the poles will need to be replaced and adjusted vertically due to cuts in the existing roadway profile. A few of the other poles will need to be adjusted and graded as required. Coordination with Rochester Public Utilities has occurred throughout the development of this project. The proposed roadway alignment has been shifted to the west to avoid further impacts to these overhead transmission lines.

In addition to the above utilities, Qwest has two buried telephone lines located on the east side of 50th Avenue NW at the northern end of the project. The lines should not be affected by construction; however, coordination with the utility owner is under way.

The City of Rochester Police Department currently patrol the area and therefore, the project will not impact this public service. The City of Rochester Public Works Department currently maintains this roadway. Because the project will increase the capacity of this roadway, from two to four lanes, additional maintenance and snow plowing services will be required.

- 29. Cumulative Impacts. Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the “cumulative potential effects of related or anticipated future projects” when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).**

**Response:**

Three future road projects are connected to this project.

- Extension/Upgrade of 50th Avenue NW from 65th Street to 85th Street and CSAH 4 to 19th Street NW

These improvements of 50th Avenue NW are shown in ROCOG’s *2035 Long Range Transportation Plan* to be improved within the next 25 years. The improvements are planned to complete 50th Avenue’s upgrade to a major urban arterial roadway by 2035. The improvements are not programmed by the City in the 2005-2010 Capital Improvements Program and therefore will be beyond the 2010 timeframe.

The future extension/upgrades of this roadway described above will also facilitate growth along the corridor in this northwest area of the City. However, the City of Rochester has projected future growth and feels that the northwest area of the City will see the most rapid growth in future years. The City previously adopted an orderly annexation agreement with Kalmar Township for land west of the 50th Avenue NW corridor for development over the next 25 years. ROCOG considered this information in planning their future arterial street network and in designating 50th Avenue NW as a future major urban arterial. Growth is already occurring west of the corridor along 55th Street NW and west of 60th Avenue NW. Therefore, growth along 50th Avenue NW in some respects can be considered infill development. These are important points to note since although growth will occur along the corridor due to the future improvements planned, the growth is already occurring and is predicted to occur in this area with or without improvements to the roadway.

- Valleyhigh Road NW (CSAH 4) Expansion Project

This project is in the 2006-2010 *Olmsted County Capital Improvements Program*. The project entails grading and widening the current roadway from 50th Avenue NW to 31st Avenue NW (approximately 2.0 miles) to four-lanes.

■ Olmsted County Road 104/60th Avenue Preservation Project

Olmsted County has begun work on a corridor preservation study to preserve right of way for the County Road 104/60th Avenue corridor from CSAH 34 on the south to CSAH 14 on the north. The ROCOG *2035 Long Range Transportation Plan* has identified this corridor as the western portion of the future outer expressway around the City of Rochester. This project area is approximately two miles west of the 50th Avenue NW Phase II project. An environmental assessment is expected to be complete by September of 2007 to identify and avoid, minimize and/or mitigate any environmental impacts associated with the preferred alternative selected. Anticipated construction of the proposed project is not expected for twenty or more years. The outcome of the project at this time will be the adoption of an Official Map to preserve right-of-way along the project corridor.

*Cumulative Impacts Conclusion*

No cumulative impacts are anticipated to result from the above road projects as each project will individually plan for avoidance, minimization and mitigation measures to reduce project impacts. Also, it is assumed that each project will obtain all necessary federal, state and local reviews, permits and approvals.

- 30. Other potential environmental impacts. If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.**

**Response:**

No potential environmental impacts are anticipated other than those discussed above.

- 31. Summary of issues. Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW. List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.**

**Response:**

Storm Water

The proposed storm water ponds will need detailed modeling and design work prior to construction.

Wetland Impacts

Estimated total wetland impacts for this project (roadway and storm water pond) are 5.89 acres.

Through preliminary design efforts, impacts to wetlands were minimized to the extent practicable. Complete avoidance is not possible, due to the close proximity of the wetlands to the edge of the roadway. There are no practical location alternatives for the road and

storm water pond, as previously described. Wetlands are located on either side of the existing roadway. Overall impacts to the wetlands will be minimized by maintaining a low road profile and steeper side slopes where possible. Temporary and permanent erosion control measures such as silt fencing, bio rolls, and seeding will prevent sedimentation from entering wetland areas. In addition, it is important to note that the regional storm water pond will have intangible open space/environmental benefits by providing open water and wetland upland areas for habitat.

Mitigation for the wetland impacts is required at a 2:1 ratio by the Minnesota Wetland Conservation Act and at a 1.5:1 ratio by Section 404 of the Clean Water Act [administered by the Corps of Engineers (COE)]. A total of 11.78 acres of mitigation must be provided, at least 8.84 acres of which must be New Wetland Credits (NWC) or “equivalent”, in order to comply with both the WCA and COE. The remaining 2.94 acres may be Public Value Credits (PVC) or a combination of NWC and PVC. Mitigation for wetland impacts will be through off-site replacement and use of the BWSR Wetland Bank.

Once final design of the road and storm water ponds is complete, a permit application and wetland replacement plan will be submitted to the Wetland Conservation Act Local Government Unit (WCA LGU) and Corps of Engineers (COE).

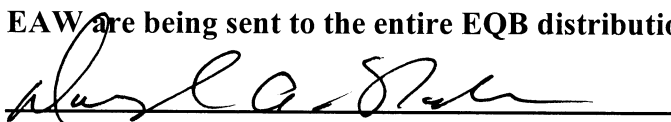
**RGU CERTIFICATION.** The Environmental Quality Board will only accept **SIGNED Environmental Assessment Worksheets** for public notice in the EQB Monitor.

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.

**Copies of this EAW are being sent to the entire EQB distribution list.**

**Signature**



**Date**

4/16/07

**Title**

Asst City Engineer

**Environmental Assessment Worksheet** was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or [www.mnplan.state.mn.us](http://www.mnplan.state.mn.us)

# **APPENDICES**

APPENDIX A-1	FIGURES
Figure 3:	Significant Project and Natural Features
Figure 4:	Existing Typical Section
Figure 5:	Proposed Typical Section
Figure 6:	Wetlands
Figure 7:	Complete Avoidance Alternative (Alternative B in Net Benefits 4(f) Programmatic Evaluation)
Figure 8:	New Alignment Alternative (Alternative C in Net Benefits 4(f) Programmatic Evaluation)
Figure 9:	Steep Slopes
Figure 10:	Two-Way Traffic Control – Volume and Geometrics
Figure 11:	Four-Way Traffic Control – Volume and Geometrics
Figure 12:	Traffic Signal Control – Volume and Geometrics
Figure 13:	Noise Monitoring and Modeling Receptor Locations

APPENDIX A-2	CORRESPONDENCE
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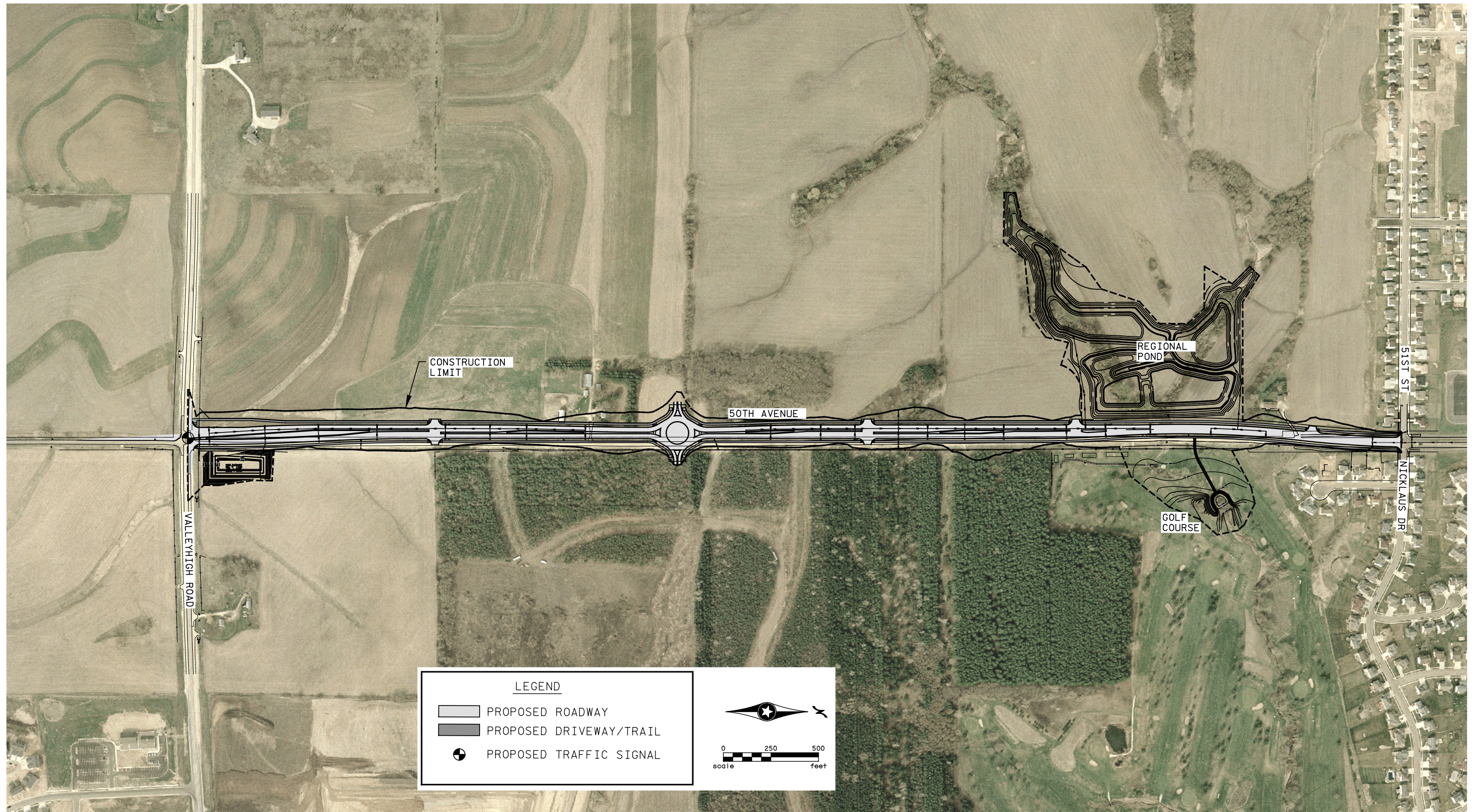
	Minnesota Department of Natural Resources (DNR) correspondence
	Minnesota Department of Transportation – Office of Environmental Services (Mn/DOT OES)
	Minnesota Department of Transportation – Cultural Resources Unit (Mn/DOT-CRU)
	National Resource Conservation Service (NRCS) and CPA-106 Form

# **APPENDIX A-1**

## **FIGURES**



HAProject\5372\FE\EA\EA\W FIGURE\Figure 3.dgn

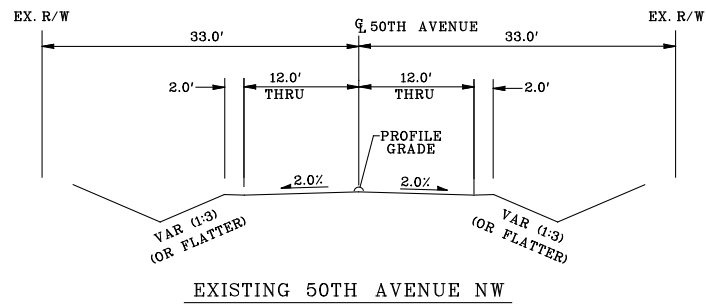


**SIGNIFICANT PROJECT AND NATURAL FEATURES**  
ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

**Figure 3**



H:\Projects\5372\ET\TYPICAL SECTION FIGURE.dgn

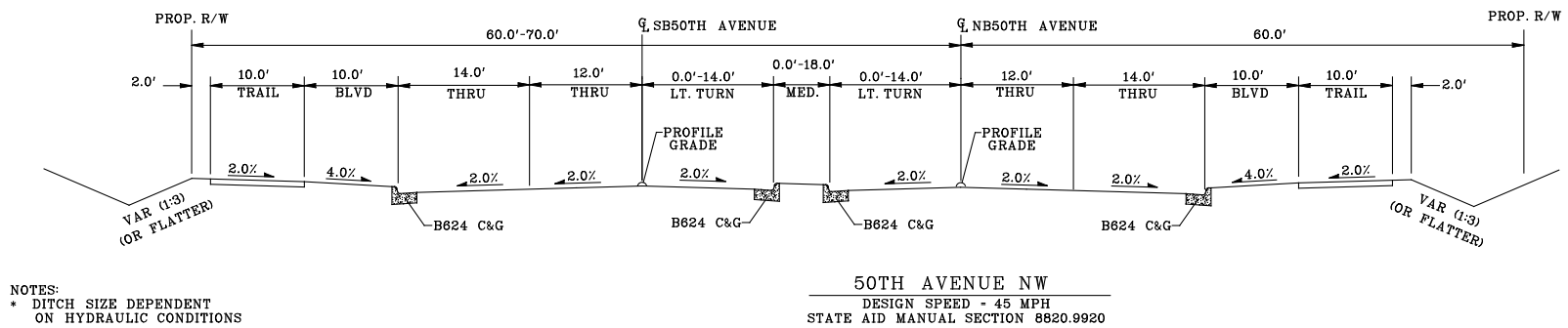


## **EXISTING TYPICAL SECTION**

ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

**Figure 4**

H:\Project\685372\ETYPICAL SECTION FIGURE.dgn

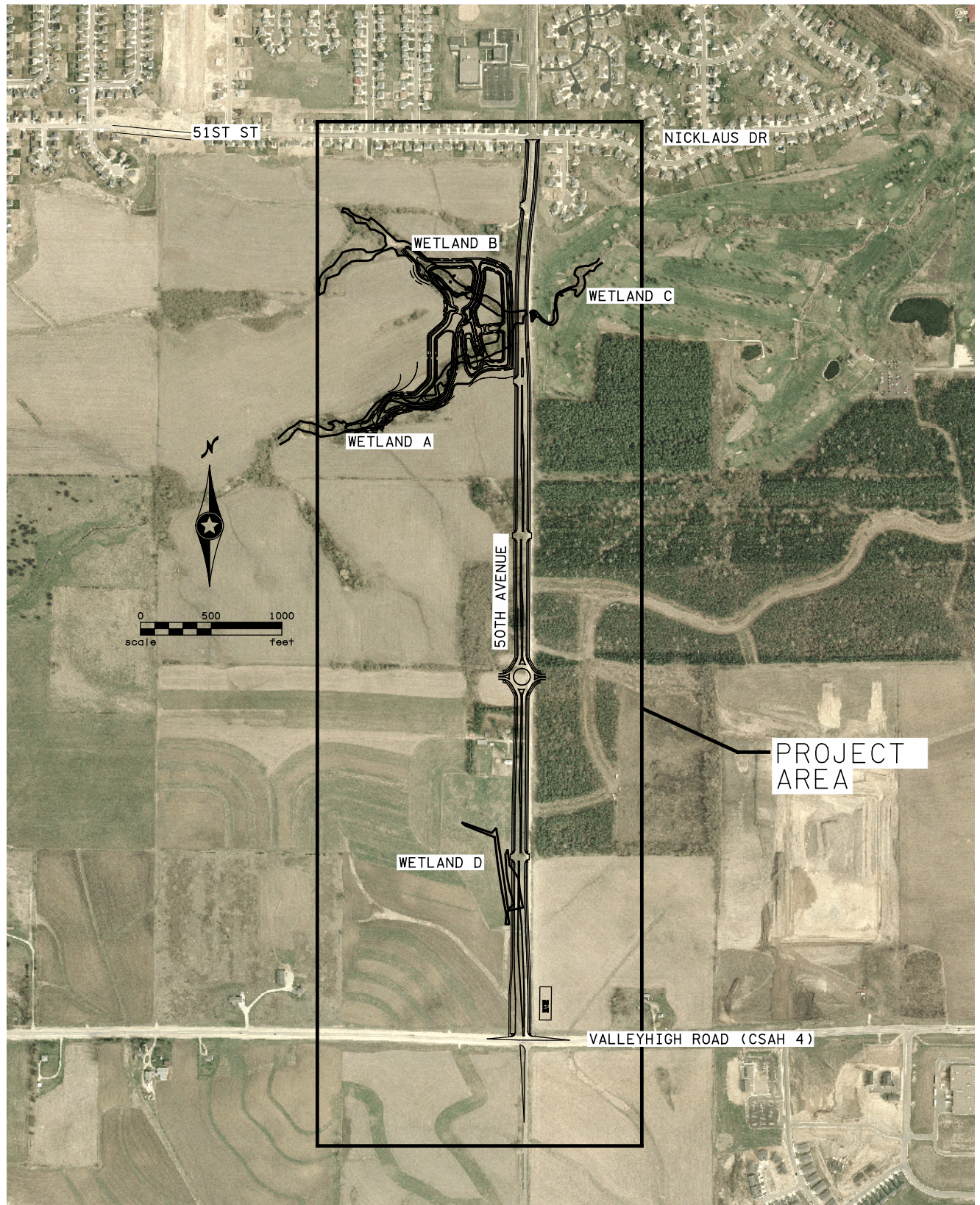


## PROPOSED TYPICAL SECTION

ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

Figure 5





H:\Projects\5372\EP\EN\AW FIGURES\Figure 6.dgn

## WETLANDS

ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

**Figure 6**





**COMPLETE AVOIDANCE ALTERNATIVE (ALTERNATIVE B IN NET BENEFITS 4(f) PROGRAMMATIC EVALUATION)**

ENVIRONMENTAL ASSESSMENT WORKSHEET

50TH AVENUE PHASE II PROJECT

City of Rochester

**Figure 7**



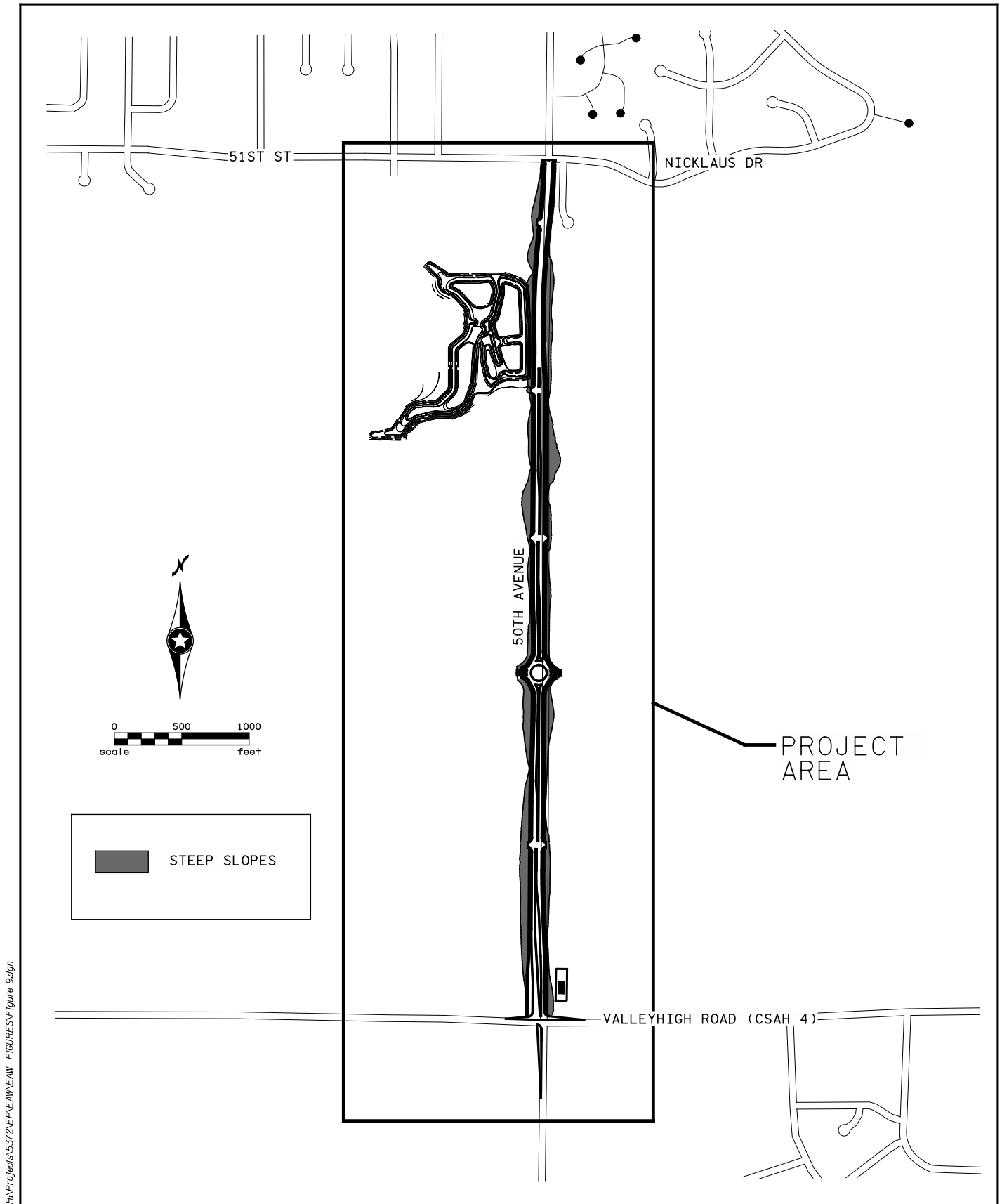


H:\Projects\5372\ENR\EA\EA\FIGURES\Alternate C.dgn

**NEW ALIGNMENT ALTERNATIVE (ALTERNATIVE C IN NET BENEFITS 4(f) PROGRAMMATIC EVALUATION)**  
 ENVIRONMENTAL ASSESSMENT WORKSHEET  
 50TH AVENUE PHASE II PROJECT  
 City of Rochester

**Figure 8**

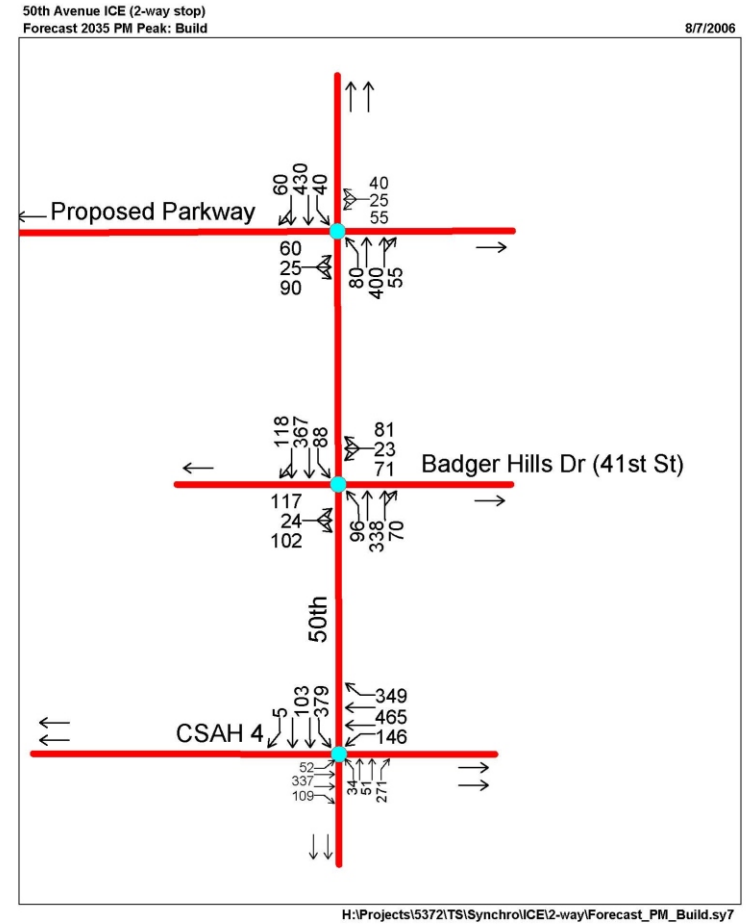
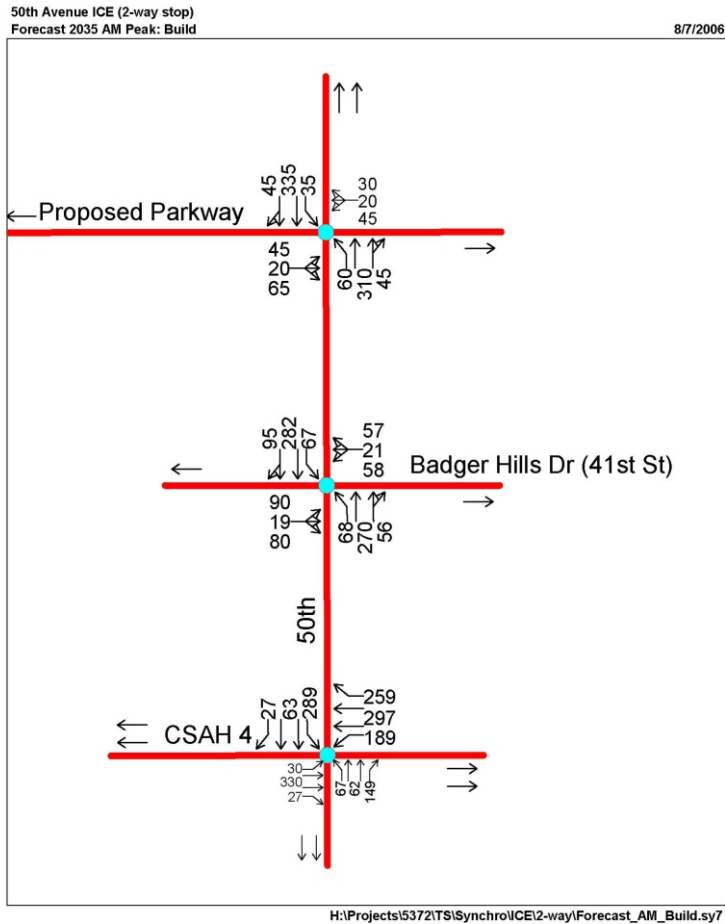




## STEEP SLOPES

ENVIRONMENTAL ASSESSMENT WORKSHEET  
 50TH AVENUE PHASE II PROJECT  
 City of Rochester

**Figure 9**



## 2-WAY TRAFFIC CONTROL - VOLUMES AND GEOMETRICS

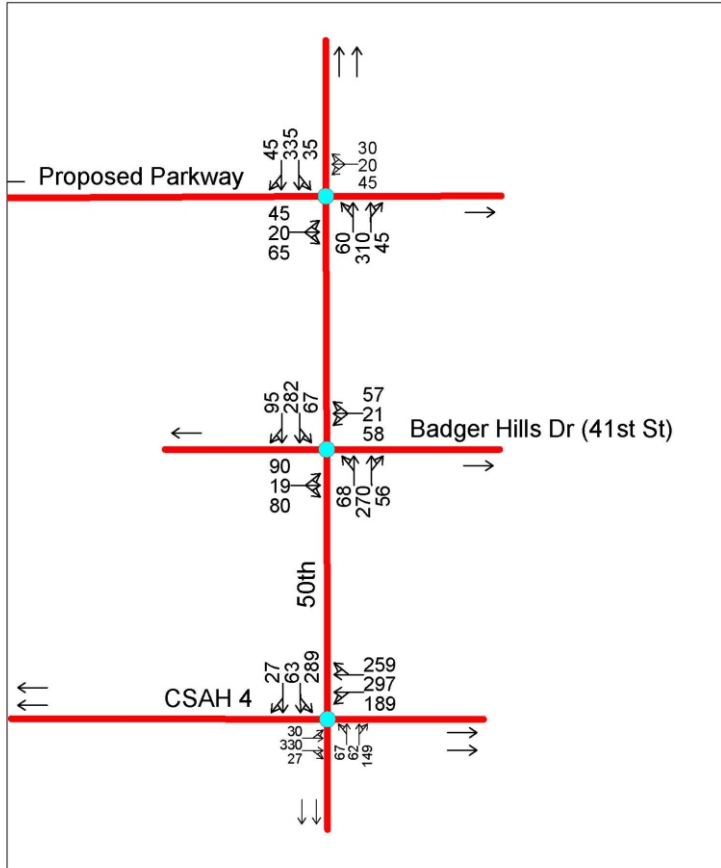
ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

Figure 10



50th Avenue ICE (4-way stop)  
Forecast 2035 AM Peak: Build

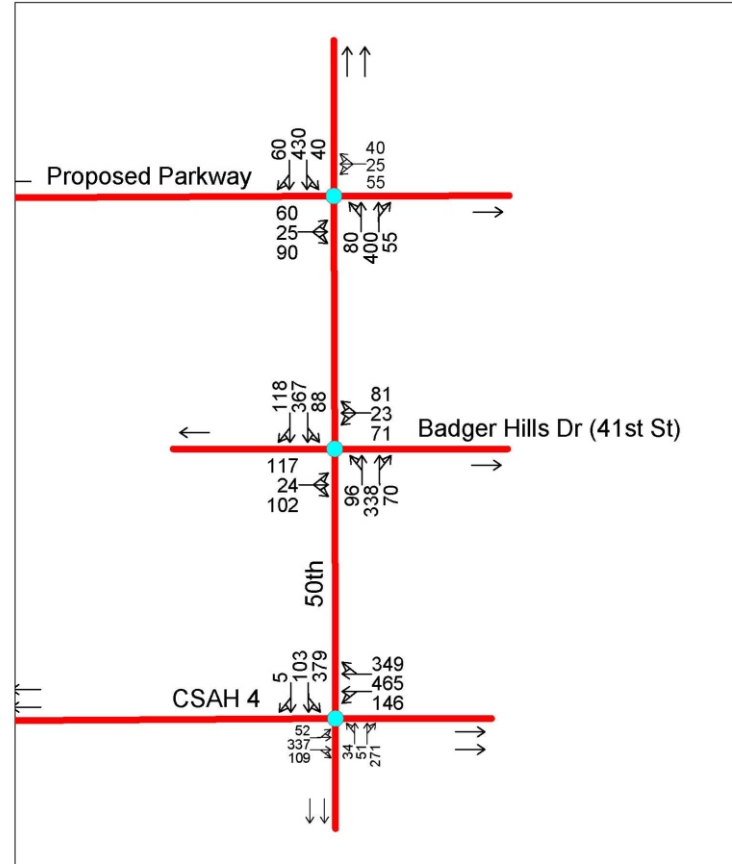
8/7/2006



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50th Avenue ICE (4-way stop)  
Forecast 2035 PM Peak: Build

8/7/2006



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## 4-WAY TRAFFIC CONTROL - VOLUMES AND GEOMETRICS

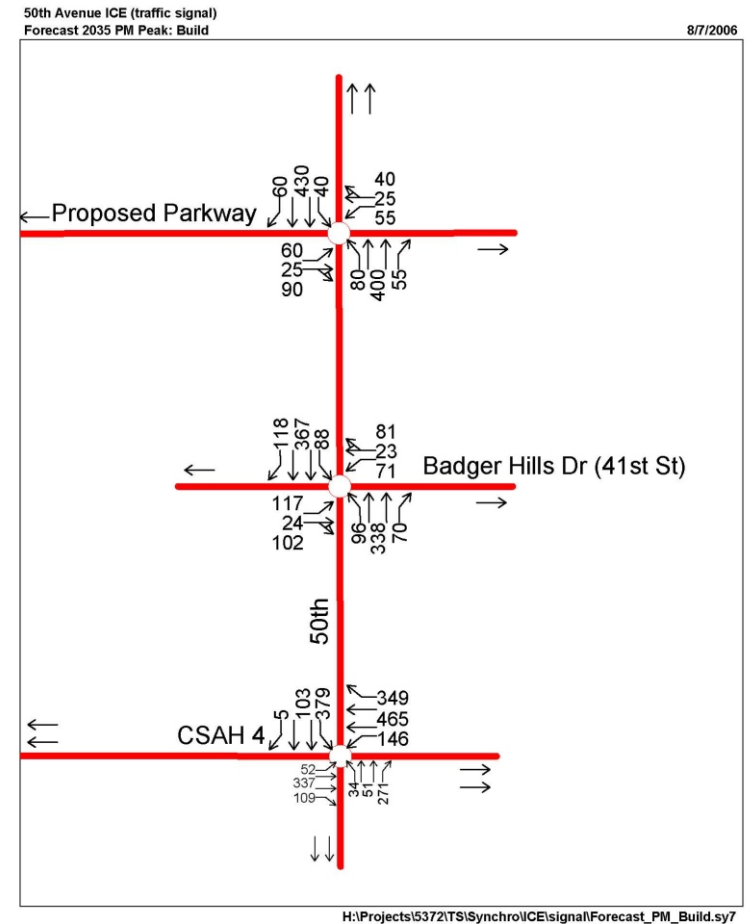
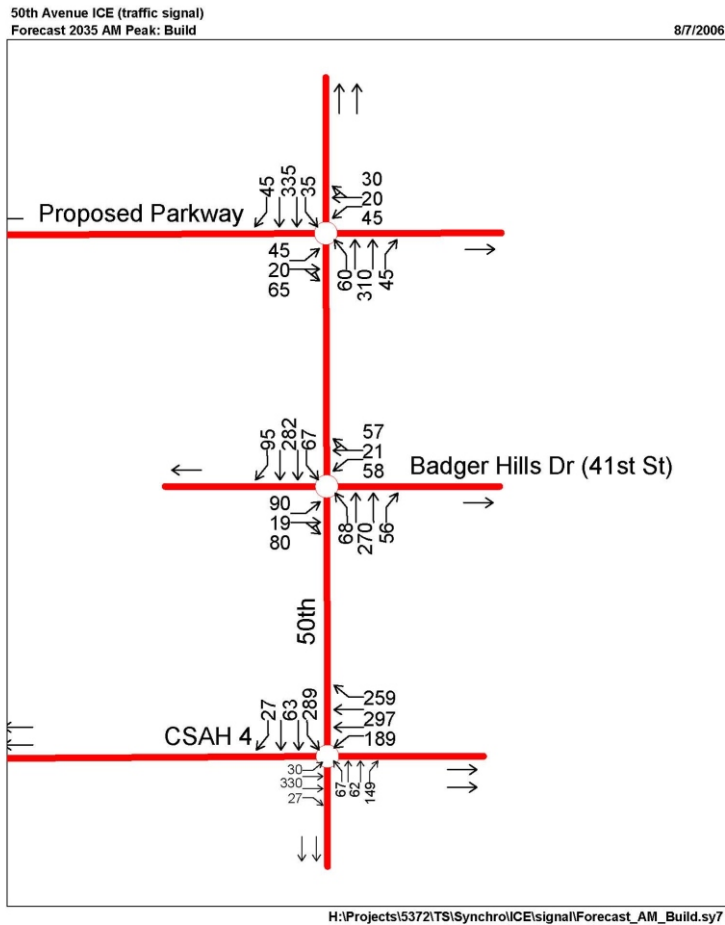
ENVIRONMENTAL ASSESSMENT WORKSHEET

50TH AVENUE PHASE II PROJECT

City of Rochester

Figure 11





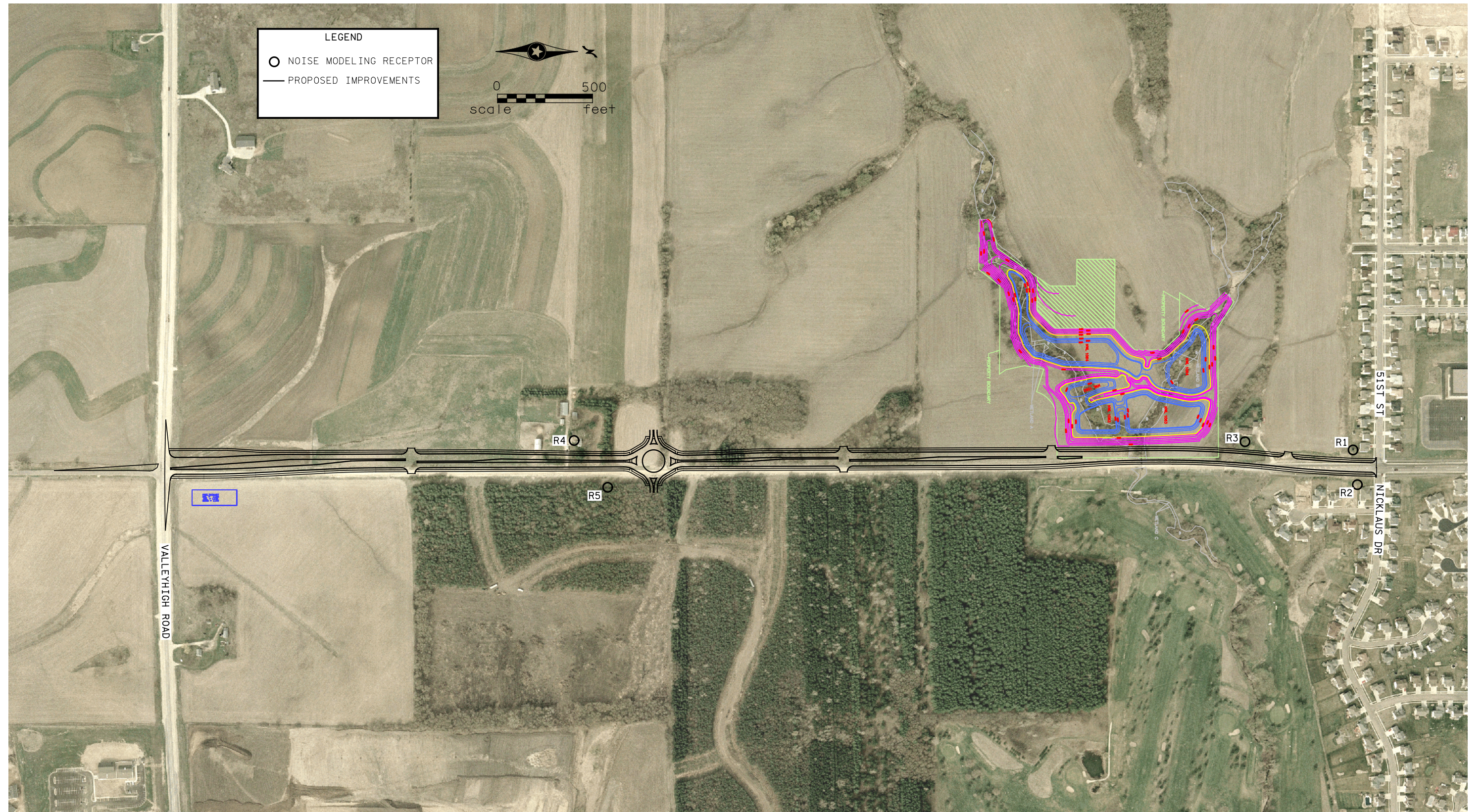
## TRAFFIC SIGNAL CONTROL - VOLUMES AND GEOMETRICS

ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

Figure 12



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**NOISE MONITORING AND MODELING RECEPTOR LOCATIONS**  
ENVIRONMENTAL ASSESSMENT WORKSHEET  
50TH AVENUE PHASE II PROJECT  
City of Rochester

**Figure 13**



# **APPENDIX A-2**

# **CORRESPONDENCE**



Minnesota Department of Transportation

Office of Environmental Services

395 John Ireland Boulevard, MS 620  
St. Paul, MN 55155-1899

September 12, 2006

Angie Bersaw  
SRF Consulting Group, Inc.  
One Carlson Parkway North  
Suite 150  
Minneapolis, MN 55447-4443

Fax: 651/ 284-3754  
Phone: 651/ 284-3750

RE: No Effect Determination (Federal Threatened and Endangered Species)  
S.P. 159-080-13 (159-080-09), 50 Avenue NW Phase II  
Roadway Reconstruction/Expansion  
City of Rochester  
Olmsted County



Dear Ms. Bersaw:

In response to your request, the proposed action has been reviewed for potential effects to federally-listed threatened and endangered (T&E) species, candidate species and listed critical habitat. As a result of this review, a determination of no effect has been made.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible Federal agency shall request Section 7 consultation with the U. S. Fish and Wildlife Service. If the consultation shows "no effect" on the listed species, further consultation is not necessary.

Scope of Action

The proposed action involves the reconstruction and expansion of an existing arterial from a two to four-lane roadway.

Listed Species

According to the County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list maintained by the U.S. Fish and Wildlife Service, Olmsted County is within the distribution range of the bald eagle (*Haliaeetus leucocephalus*), Leedy's roseroot (*Sedum integrifolium*) and the prairie bush clover (*Lespedeza leptostachya*), all federally-listed species.

Factors considered in making the determination of no effect are described below:

Critical Habitat

There is no designated critical habitat within the action area.

Known Occurrences

According to the information provided by the Natural Heritage Database (updated 3-6-06) maintained by the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service (Twin Cities ES Field Office), there are no known occurrences of federally-listed T&E or candidate species within the action area. As such, the proposed action has little to no potential to have any measurable influence on federally-listed T&E species, candidate species or on the habitat for which they depend.

If modifications are made or new information becomes available which indicates that listed species may be affected, please contact this office. This review was completed for federally-listed T&E and candidate species only. For information on state-listed T&E species, contact the Endangered Species Environmental Review Coordinator, Natural Heritage and Nongame Research Program, Minnesota Department of Natural Resources (651) 259-5107.

Sincerely,

  
Jason Alcott  
Natural Resource Specialist, Senior

cc: Gerry Larson  
An equal opportunity employer

file



Minnesota Department of Transportation

Office of Environmental Services

Mail Stop 620  
395 John Ireland Boulevard

Office Tel: (651) 297-8729

Fax: (651) 282-9834

July 25, 2006

Angie Bersaw  
SRF Consulting Group, Inc.  
One Carlson Pkwy N., Suite 150  
Minneapolis, MN 55447-4443



Regarding: 50th Street NW (Olmsted County)  
Reconstruction from Valleyhigh Road (CSAH 4) to 51<sup>st</sup> Street  
T. 107 N., R. 14 W., S. 17-20, Rochester

Dear Ms. Bersaw:

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the Programmatic Agreement (PA) between the FHWA and the Minnesota State Historic Preservation Office (SHPO) (June 2005). The project involves the reconstruction of 50th Street NW from Valleyhigh Road (CSAH 4) to 51st Street (Nicklaus Drive) consisting of expanding it from a two lane rural section to a four lane urban section. The right-of-way will expand from 33 to 60 feet on either side of the centerline. About 9.2 acres of additional right-of-way will be acquired.

There are no known archaeological sites in the area of potential effect (APE). The Mn/Model survey implementation model depicts the APE as having a high and medium potential for sites. The APE has a low potential for unknown sites due to distance from water. There are no eligible or potentially eligible buildings or structures in the APE.

We have determined that there will be **no historic properties affected** by the project as currently proposed. As there are no historic properties within the project APE, the section 106 review of this project is now complete and no SHPO comment period and response are required under the terms of the new PA. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

Craig Johnson  
Archaeologist

cc: Scott Anfinson, State Archaeologist  
Mn/DOT CO File

Joe Hudak, Mn/DOT CRU  
Mn/DOT CRU Project File

United States Department of Agriculture



Natural Resources Conservation Service  
330 Elton Hills Drive, NW  
Rochester, MN 55901

Phone: (507) 289-7454  
FAX: (507) 289-3742

October 18, 2006



Angela Bershaw, Transportation Planner  
SRF Consulting Group, Inc.  
One Carlson Parkway North, Suite 150  
Minneapolis, MN 55447-4443

Re: SP 159-080-13 (159-080-09)

I have reviewed the amended material for the roadway expansion of 50<sup>th</sup> Ave., NW, Rochester. Enclosed is the AD1006 Form with the NRCS parts completed. Moving this roadway 50 feet west, does not change the original evaluation of this project with regard to the conversion of farmland. The soils involved remain the same and in equal proportions to that of the original evaluation of May 31, 2006.

Call if you have any questions.

John F. Beck  
Area Resource Soil Scientist

cc: Dave Copeland, District Conservationist, Rochester

*Helping People Help the Land*

An Equal Opportunity Provider and Employer

FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>10/12/06</b>	4. Sheet 1 of <b>1</b>		
1. Name of Project <b>50th Avenue NW Phase II</b>		5. Federal Agency Involved			
2. Type of Project <b>Road and Right of Way</b>		6. County and State <b>Olmsted County, MN</b>			
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>10/18/06</b>	2. Person Completing Form <b>Beck</b>		
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated   Average Farm Size <b>346</b>			
5. Major Crop(s) <b>Corn / Soybeans</b>	6. Farmable Land in Government Jurisdiction Acres: <b>363,955</b> % <b>86.8</b>		7. Amount of Farmland As Defined in FPPA Acres: <b>323,245</b> % <b>89</b>		
8. Name Of Land Evaluation System Used <b>LE part of LESA</b>	9. Name of Local Site Assessment System		10. Date Land Evaluation Returned by NRCS <b>10/18/06</b>		
<b>PART III (To be completed by Federal Agency)</b>		<b>Alternative Corridor For Segment</b>			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		<b>13</b>			
B. Total Acres To Be Converted Indirectly, Or To Receive Services		<b>0</b>			
C. Total Acres In Corridor		<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland		<b>7.81</b>			
B. Total Acres Statewide And Local Important Farmland		<b>3.66</b>			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		<b>3.5x10<sup>-3</sup></b>			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		<b>59</b>			
<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>		<b>80</b>			
<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>		Maximum Points			
1. Area in Nonurban Use		15	<b>9</b>		
2. Perimeter in Nonurban Use		10	<b>9</b>		
3. Percent Of Corridor Being Farmed		20	<b>10</b>		
4. Protection Provided By State And Local Government		20	<b>0</b>		
5. Size of Present Farm Unit Compared To Average		10	<b>10</b>		
6. Creation Of Nonfarmable Farmland		25	<b>0</b>		
7. Availability Of Farm Support Services		5	<b>5</b>		
8. On-Farm Investments		20	<b>8</b>		
9. Effects Of Conversion On Farm Support Services		25	<b>0</b>		
10. Compatibility With Existing Agricultural Use		10	<b>3</b>		
TOTAL CORRIDOR ASSESSMENT POINTS		160	<b>54</b>	<b>0</b>	<b>0</b>
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)		100			
Total Corridor Assessment (From Part VI above or a local site assessment)		160	<b>54</b>	<b>0</b>	<b>0</b>
TOTAL POINTS (Total of above 2 lines)		260	<b>134</b>	<b>0</b>	<b>0</b>
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		
5. Reason For Selection:					

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor



# Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25  
500 Lafayette Road

St. Paul, Minnesota 55155-40\_\_

Phone: (651) 259-5107 Fax: (651) 296-1811 E-mail: sarah.hoffmann@dnr.state.mn.us

June 12, 2006

Ms. Angie Bersaw  
SRF Consulting Group, Inc.  
One Carlson Parkway North, Suite 150  
Minneapolis, MN 55447-4443

Re: Request for Natural Heritage information for vicinity of proposed 50<sup>th</sup> Avenue NW,  
T107N R14W Sections 17-20, Olmsted County  
NHNRP Contact #: ERDB 20010221-0004

Dear Ms. Bersaw,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there is 1 known occurrence of a rare species or native plant community in the area searched (for details, see enclosed database printout and explanation of selected fields). However, based on the nature and location of the proposed project I do not believe it will affect any known occurrences of rare features.

The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, and has been completed for Olmsted County. Our information about native plant communities is, therefore, quite thorough for that county. However, because survey work for rare plants and animals is less exhaustive, and because there has not been an on-site survey of all areas of the county, ecologically significant features for which we have no records may exist on the project area.

The enclosed results of the database search are provided in two formats: short record report and long record report. To control the release of locational information, which might result in the damage or destruction of a rare element, both printout formats are copyrighted.

The short record report provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an Environmental Assessment Worksheet, municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the short record report for any other purpose, please contact me to request written permission. **The long record report includes more detailed locational information, and is for your personal use only. If you wish to reprint the long record report for any purpose, please contact me to request written permission.**

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other natural resource-related issues, you may contact your Regional Environmental Assessment Ecologist, Todd Kolander, at (507) 359-6073.

An invoice in the amount of \$69.13 will be mailed to you under separate cover within two weeks of  
DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929





the date of this letter. You are being billed for map and database search and staff scientist review. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

A handwritten signature in black ink that reads "Lisa Jopal". The signature is written in a cursive, flowing style.

FOR Sarah D. Hoffmann  
Endangered Species Environmental Review Coordinator

encl: Database search results  
Rare Feature Database Print-Outs: An Explanation of Fields

The Natural Heritage & Nongame Research Program recently adopted a new database system called Biotics. As a result of this change, the layout and contents of the database reports have been revised. Many of the fields included in the new reports are the same or similar to the previous report fields, however there are several new fields and some of the field definitions have been slightly modified. We recommend that you familiarize yourself with the latest field explanations.

## Rare Features Database Reports: An Explanation of Fields

The Rare Features database (Biotics) is part of the Natural Heritage Information System, and is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Minnesota Department of Natural Resources (DNR).

***\*\*Please note that the print-outs are copyrighted and may not be reproduced without permission\*\****

**Field Name: [Full (non-abbreviated) field name, if different]. Further explanation of field.**

**-E-**

**Element Name and Occ #:** [Element Name and Occurrence Number]. The Element is the name of the rare feature. For plant and animal species records, this field holds the scientific name followed by the common name in parentheses; for all other elements (such as native plant communities, which have no scientific name) it is solely the element name. Native plant community names correspond to Minnesota's Native Plant Community Classification (Version 2.0). The Occurrence Number, in combination with the Element Name, uniquely identifies each record.

**EO Data:** [Element Occurrence Data]. For species elements, this field contains data collected on the biology of the Element Occurrence\* (EO), including the number of individuals, vigor, habitat, soils, associated species, peculiar characteristics, etc. For native plant community elements, this field is a summary text description of the vegetation of the EO, including structure (strata) and composition (dominant/characteristic species), heterogeneity, successional stage/dynamics, any unique aspects of the community or additional noteworthy species (including animals). Note that this is a new field and it has not been filled out for many of the records that were collected prior to conversion to the new database system. Some of the information meeting the field definition may be found in the General Description field.

**EO ID#:** [Element Occurrence Identification Number]. Unique identifier for each Element Occurrence record.

**EO Rank:** [Element Occurrence Rank]. An evaluation of the quality and condition of an Element Occurrence (EO) from A (highest) to D (lowest). Represents a comparative evaluation of: 1) quality as determined by representativeness of the occurrence especially as compared to EO specifications and including maturity, size, numbers, etc. 2) condition (how much has the site and the EO itself been damaged or altered from its optimal condition and character). 3) viability (the long-term prospects for continued existence of this occurrence - used in ranking species only). EO Ranks are assigned based on recent fieldwork by knowledgeable individuals.

**Extent Known?:** A value that indicates whether the full extent of the Element is known (i.e., it has been determined through field survey) at that location. If null, the value has not been determined.

**-F-**

**Federal Status:** Status of species under the U.S. Endangered Species Act: LE = endangered; LT = threatened; LE,LT = listed endangered in part of its range, listed threatened in another part of its range; LT,PDL = listed threatened, proposed for delisting; C = candidate for listing. If null or "No Status" the species has no federal status.

**First Observed Date:** Date that the Element Occurrence was first reported at the site in format YYYY-MM-DD. A year followed by "Pre" indicates that the observed date was sometime prior to the date listed, but the exact date is unknown.

**-G-**

**General Description:** General description or word picture of the area where the Element Occurrence (EO) is located (i.e., the physical setting/context surrounding the EO), including a list of adjacent communities. When available, information on surrounding land use may be included. Note that the information tracked in this field is now more narrowly defined than it was in the old database system, and some of the information still in this field more accurately meets the definition of the new EO Data field. We are working to clean up the records so that the information in the two fields corresponds to the current field explanations described herein. Also note that the use of uppercase in sentences in this field is not significant but rather an artifact of transferring data from the old database system to the new system.

**Global Rank:** The global (i.e., range-wide) assessment of the relative rarity or imperilment of the species or community. Ranges from G1 (critically imperiled due to extreme rarity on a world-wide basis) to G5 (demonstrably secure, though perhaps rare in parts of its range). Global ranks are determined by NatureServe, an international network of natural heritage programs and conservation data centers.

**-L-**

**Last Observed Date:** Date that the Element Occurrence was last observed to be extant at the site in format YYYY-MM-DD.

**Last Survey Date:** Date of the most recent field survey for the Element Occurrence, regardless of whether it was found during the visit. If the field is blank, assume the date is the same as the Last Observed Date.

**Location Description:** County or Counties in which the Element Occurrence was documented followed by Township, Range, and Section information (not listed in any particular order). Each unique Township, Range, and Section combination is separated by a comma. In some cases, there are too many Township, Range, and Section combinations to list in the field, in which case, the information will be replaced with, "Legal description is too lengthy to fit in allotted space".

**-M-**

**Managed Area(s):** Name of the federally, state, locally, or privately managed park, forest, refuge, preserve, etc., containing the occurrence, if any. If this field is blank, the element probably occurs on private land. If "(Statutory Boundary)" occurs after the name of a managed area, the location may be a private inholding within the statutory boundary of a state forest or park.

**MN Status:** [Minnesota Status]. Legal status of plant and animal species under the Minnesota Endangered Species Law: END = endangered; THR = threatened; SPC = special concern; NON = tracked, but no legal status. Native plant communities, geological features, and colonial waterbird nesting sites do not have any legal status under the Endangered Species Law and are represented by a N/A.

**-N-**

**NPC Classification (v1.5):** Native plant community name in Minnesota's Native Vegetation: A Key to Natural Communities (Version 1.5). This earlier classification has been replaced by Minnesota's Native Plant Community Classification (Version 2.0).

**-O-**

**Observed Area:** The total area of the Element Occurrence, in acres, which is measured or estimated during fieldwork. If null, the value has not been determined.

**Ownership Type:** Indicates whether the land on which the Element Occurrence was located was publicly or privately owned; for publicly owned land, the agency with management responsibility is listed, if known.

**-S-**

**Site Name:** The name of the site(s) where the Element Occurrence is located. Sites are natural areas of land with boundaries determined and mapped according to biological and ecological considerations.

**Survey Site #/Name:** The name of the survey site, if applicable, where the Element Occurrence is located. Survey sites are sites that provide a geographic framework for recording and storing data, but their boundaries are not based on biological and ecological considerations. Minnesota County Biological Survey site numbers, if applicable, are also listed in this field.

**Survey Type:** Information on the type of survey used to collect information on the Element Occurrence.

**Surveyor(s):** Name(s) of the person(s) that collected survey information on the Element Occurrence.

**State Rank:** Rank that best characterizes the relative rarity or endangerment of the taxon or plant community in Minnesota. The ranks do not represent a legal status. They are used by the Minnesota Department of Natural Resources to set priorities for research, inventory and conservation planning. The state ranks are updated as inventory information becomes available. S1 = Critically imperiled in Minnesota because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. S2 = Imperiled in Minnesota because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. S3 = Vulnerable in Minnesota either because rare or uncommon, or found in a restricted range, or because of other factors making it vulnerable to extirpation. S4 = Apparently secure in Minnesota, usually widespread. S5 = Demonstrably secure in Minnesota, essentially ineradicable under present conditions. SH = Of historical occurrence in the state, perhaps having not been verified in the past 20 years, but suspected to be still extant. An element would become SH without the 20-year delay if the only known occurrences in the state were destroyed or if it had been extensively and unsuccessfully looked for. SNR = Rank not yet assessed. SU = Unable to rank. SX = Presumed extinct in Minnesota. SNA = Rank not applicable. S#S# = Range Rank: a numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the element. S#B, S#N = Used only for migratory animals, whereby B refers to the breeding population of the element in Minnesota and N refers to the non-breeding population of the element in Minnesota.

**-V-**

**Vegetation Plot:** Code(s) for any vegetation plot data that have been collected within this Element Occurrence (i.e., either Releve Number or the word "RELEVE" indicates that a releve has been collected).

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\* Element Occurrence – an area of land and/or water in which an Element (i.e., a rare species or community) is, or was, present, and which has practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. Specifications for each species determine whether multiple observations should be considered 1 Element Occurrence or 2, based on minimum separation distance and barriers to movement.

## Data Security

Locations of some rare features must be treated as sensitive information because widespread knowledge of these locations could result in harm to the rare features. For example, wildflowers such as orchids and economically valuable plants such as ginseng are vulnerable to exploitation by collectors; other species, such as bald eagles, are sensitive to disturbance by observers. For this reason, we prefer that publications not identify the precise locations of vulnerable species. We suggest describing the location only to the nearest section. If this is not acceptable for your purposes, please call and discuss this issue with the Endangered Species Environmental Review Coordinator for the Natural Heritage and Nongame Research Program at (651) 259-5107.

Minnesota Natural Heritage & Nongame Research Program  
Short Record Report of Element Occurrences within 1 mile radius of:  
50th Avenue NW Reconstruction  
T107N R14W Sections 17-20  
Olmsted County

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Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date
Olmsted County, MN					
<u>Sedimentary unit or sequence (ordovician)</u> (Sedimentary Unit or Sequence (Ordovician)) #17		N/A	SNR	GNR	1980
Location Description: T107N R14W S29, T107N R14W S32, T107N R14W S28					

Records Printed = 1

Minnesota Natural Heritage & Nongame Research Program  
Long Record Report of Element Occurrences within 1 mile radius of:  
50th Avenue NW Reconstruction  
T107N R14W Sections 17-20  
Olmsted County

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Element Name and Occ. #: Sedimentary unit or sequence (ordovician) (Sedimentary Unit or Sequence (Ordovician)) #17

EO ID #: 218

Observed Area:

Extent Known?:

Ownership Type: Unknown

Location Description: Olmsted County, MN

T107N R14W S29, T107N R14W S32, T107N R14W S28

Site Name:

Survey Site #/Name:

Vegetation Plot:

General Description: HWY 14 ROADCUT WEST OF ROCHESTER. S SIDE OF HWY, CA 2.0 MI W OF JCT WITH HWY 52. CA 35 FT OF ST PETER SST, 7 FT OF GLENWOOD FMTN & 3 FT OF PLATTEVILLE FMTN. GLENWOOD IS SHALE & SST, PLATTEVILLE IS DOLOMITIC LIMESTONE.

EO Data:

Last Observed Date: 1980

First Observed Date:

Last Survey Date:

Managed Area(s):

Survey Type:

Surveyor(s): Webers, G.

MN Status: N/A

Federal Status:

State Rank: SNR

Global Rank: GNR

EO Rank: Not ranked